The Manila-Acapulco Galleons:
The Treasure Ships of the Pacific

With an Annotated List of the Transpacific Galleons 1565-1815

Shirley Fish

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Dedicated With Love to Ian Terry Fish

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Preface

As I have always had a love for the sea and anything to do with sea vessels, I was disappointed to find that there was only one book which was specifically devoted to the subject of the Manila-Acapulco galleons, and this work was produced by William Lytle Schurz in 1939. Since Schurz's monumental and well-researched work, no other attempt has been made to tackle this enormous topic even though new information has been introduced into the overall picture of the historical aspects of the vessels. As a result, I turned my attention to researching the topic out of a personal interest in maritime history. I also devoted myself to trying to find whatever new archaeological information was available regarding the vessels. The information gathered through archaeological excavations in the twentieth century, has shed another dimension to the story of the galleons which formed the world's first transpacific trade link between the Philippines, China and Mexico.

Unlike Schurz's work, where he examined the historical and political aspects concerning the galleons, I have tried to present a description of the vessels themselves i.e., how they became an extension of Spain's Atlantic fleets and how they were strictly regulated, constructed, manned and provisioned. Additionally, I have added chapters on the types of cargoes and weaponry the vessels carried, as well as a discussion on daily life on the galleon. Wherever possible, I have inserted eyewitness accounts which, I believe, has added an enriching element into the story of the Manila-Acapulco galleons.

I have also tried using as many archaeological materials as I could locate and study in order to better describe the story of the galleons from an archaeological point of view. In particular, the fact that the *San Diego* galleon was the only vessel discovered through archaeological underwater excavations in the Philippines, had provided an enormous amount of information on the type of sea vessels which were constructed in the Philippines in the sixteenth century. The majority of the *San Diego's* artifacts are now housed in a permanent exhibition at the National Museum of the Philippines in Manila.

While, I have tried to present the latest information uncovered through my research of the topic, I realize that future researchers will be able to add so much more to the discussion of the Manila-Acapulco galleons. Almost every chapter in this book can lend itself to further exploration and expansion.

The book has also been provided with an "Annotated List of the Transpacific Galleons," from the sixteenth to the nineteenth centuries.

The vessels mentioned in the list are those that I came across during my research. Whenever possible, I have added a commentary on any known bits of information regarding the said galleons. The list is not complete, but future researchers can add vessels to it as they become known.

I would like to thank Cynthia Ongpin Valdes for her permission to use the photos in her publication, "*Saga of the San Diego*," as well as Owis Bolunia, Archaeologist with the National Museum of the Philippines in Manila for photos of the ship's anchor found in the province of Sorsogon, Philippines. I also thank Dr. Eusebio Dizon, Chief Archaeologist at the National Museum of the Philippines for his comments on the *San Diego* archaeological underwater excavation of the galleon in the 1990s.

In 2010, a full sized replica of a galleon arrived in Manila Bay from Spain. The vessel was on view for several days before sailing to Cebu. The public was invited to see and tour the ship. I would like to thank Arlene Maurillo, in Manila, for the use of her photos of the galleon.

Lastly, I would like to take the opportunity to thank my husband, Ian Fish, for his patience and assistance in endlessly reading and commenting on my manuscript as the work progressed. His invaluable input has been tremendously appreciated.

Shirley Fish
Manila, Philippines
January 2011

Chapter 1

The Tragedy of the *Nuestra Senora de la Concepcion*

After receiving the city's blessing and prayers for a safe journey across the Pacific, the *Nuestra Senora de la Concepcion* and her accompanying vessel the *San Ambrosio* sailed from Manila to Acapulco in June 1638. The city's entire Spanish community had turned out to say farewell to the officers, passengers and crew of the two vessels. It was commonly known that the voyage from the Philippines to Mexico was often filled with many perils along the way. Severe storms, high waves, fire or a ship that was found to be unseaworthy, while already too far out in the ocean to do anything about it, added to the tension aboard the vessels. Another concern was always the fear that a pirate ship or privateer could attack the vessels, killing or capturing its passengers. For many who sailed on the galleons, the voyage was always viewed as a terrifying prospect where almost anything could happen and often did. It was not unusual for those making the journey to write a will before putting their lives at risk.

The vessels sailed as closely as they safely could to the stone walls of the fortified city and awaited the customary send off by the priests of Manila Cathedral. If the ship was fortunate in having good sailing weather, the hazardous journey to Acapulco was expected to take at least six to seven months. The two ships first had to travel through the maze of islands, shoals and sandbars that lay scattered across the seas between Manila and the San Bernardino Strait. The strait consisted of a dangerous body of water serving as the passageway between the islands of Luzon and Samar and opening onto the Pacific. This part of the journey could take from one to two months to complete depending on the winds and currents the ship encountered. As the vessels continued towards the San Bernardino Strait, they would have been expected to stop in several pre-determined locations in order to take on fresh water and provisions.

When the two ships entered the Pacific, they sailed in a northerly route towards Japan where they picked up the Kuroshio Current off the coast of Taiwan. From there, the circular current carried them to the Westerly's or anti-trade winds found between the latitudes of 35 and 65 degrees and blowing from west to the east. These trade winds, in turn, propelled the vessels towards the coast of California and the area of Mendocino. While keeping the coastal areas of California in sight, the galleon normally turned in the southerly direction towards Baja California and then to the headland of Cape Corrientes on the

Mexican coast. From there it was a short distance further south to Acapulco.

As the officers, crew and passengers realized that the voyage was a dangerous undertaking, daily Masses and prayers were said by the priests aboard the vessels. It was hoped that the religious services would ensure a safe journey for everyone aboard the ships. The priests, from the various religious orders, were kept quite occupied as they listened to daily confessions or conducted a morning Mass. Their words consoled the terrified passengers and the novice members of the crew. The passengers on the ship were composed of government officials and their families, clergy members and missionaries, merchants and other travelers. Once these individuals arrived in Acapulco, they could, in turn, continue their journeys to Mexico City, Veracruz and Spain or to other Spanish settlements in the Americas such as Panama or Peru.

However, those aboard the two vessels hoped that they would be protected by divine intervention if required. As was customary in Spain, vessels such as the Capitana the *Nuestra Senora de la Concepcion* and the Almiranta the *San Ambrosio*, were named after religious figures such as patron saints or sites of importance to Catholics. In this case, the *Nuestra Senora de la Concepcion* was named after the Virgin Mary or Our Lady of the Immaculate Conception. It was expected that by naming the ship after a religious figure, it would be protected from any harm during the voyage. In the case of the *San Ambrosio*, it was probably named after Saint Ambrose or Aurelius Ambrosius, the fourth century bishop of Milan. He was known for his piety and care for the poor.

For the *Nuestra Senora de la Concepcion*, this was her second journey to Acapulco. Her first voyage to Mexico took place in 1636, and now she was travelling once again across the ocean, as her construction and seaworthiness had already been tested and she was found to be fit for another voyage. According to archival evidence, the galleon was constructed in 1633 at the Cavite shipyard. At that time, the *Nuestra Senora de la Concepcion* was regaled as being the largest vessel of its size to have been built there. The ship had a carrying capacity of 2,000 tons and measured approximately 160 feet in length. It was 50 feet wide and had a depth of her cargo hold of 20 feet. The galleon was strongly constructed using the best tropical hardwoods to be found in the Philippines. As a result, her hull was almost indestructible. Ship worms and cannon balls from enemy ships could not penetrate her sides.

The formidable galleon carried four hundred individuals with half consisting of a full complement of officers and crew and the other half composed of passengers. She also carried an enormous supply of

provisions, equipment and weaponry. Her decks and hold were overflowing with cargo. Every available nook and cranny on the ship was filled with Oriental goods from China, Japan, India and other Asian trade countries and bound for markets in Mexico, Panama, Columbia, Peru, Havana and Spain. These consisted of valuable silks, textiles, spices, furnishings and ornamental pieces such as lacquered boxes and decorative screens, enormous quantities of Chinese porcelains of every description, size and embellishment and a vast array of other valuable items. The goods would eventually be sold at the Acapulco Fair, which was held annually in the port city whenever a galleon arrived there from Manila. Goods were paid for in silver pesos, which were sent to the investors in Manila and China on the returning galleon.

The accompanying vessel, the *San Ambrosio*, was most probably also carrying a large quantity of Oriental merchandise, as well as passengers to Mexico. During the voyage, the vessels drifted apart from each other. This may have been due to storms in the region with winds carrying the ships in separate directions. In any case, the *San Ambrosio* managed to sail along the traditional course staying on a northerly track to California and then to Acapulco where she arrived safe and sound.

The Disaster Takes Place

Despite the heartfelt prayers and blessings bestowed upon the *Nuestra Senora de la Concepcion* and all who sailed aboard her, she was not destined to arrive in Acapulco. On September 20, 1638, she was wrecked along the reefs of Agingan Bay, in the southern coast of Saipan, Northern Marianas. Due to the combination of bad weather and a lack of vigilance on the part of the pilots in charge of the ship's navigation, the galleon was sent tumbling onto a reef. Apparently, there was a disturbance on the galleon, which had become so out of control that the navigation of the ship was completely forgotten. Perhaps there was a fight amongst the officers and crew or a mutiny was attempted with a planned takeover of the vessel. Whatever happened on the galleon, it appears that no one was paying attention to the ship's course and the fact that it had been dangerously drifting towards the reefs.

On the day of the shipwreck, the sea was rough and the wind had risen as the ship came closer to the reefs. At one point, the wind was blowing so hard that it broke one of the ship's masts in two. The galleon became uncontrollable as she was pushed one way and then the other until she finally crashed onto the reef where she was dashed to pieces. No matter how hard the officers and crew tried to maneuver the ship away from the reef it was obvious that their situation had become hopeless. Huge waves began striking the ship and she was

quickly broken into pieces.

As the ship struggled against the waves, cargo and ballast spilled into the sea. This was followed by those individuals who tried to save themselves by jumping overboard. As they were close to the beach, which was a short distance from the reef and where part of the ship was stuck and held fast, those who were able to swim to the shore found another dilemma awaiting them. The natives of the islands, the Chamorros, were using spears and slingshots to pelt them with stones as they exhaustively struggled to the shore. If the survivors had any strength left, as they reached the shore, they had no idea that their struggle to survive was turning into a daunting exercise.

How some of the passengers and crew aboard the vessel managed to survive this ordeal may never be known, but some did live to tell the tale of the shipwreck. Most of the four hundred passengers and crew perished during the mishap. Twenty-eight Spaniards and an unspecified number of non-Spaniards who were most probably Filipinos, Chinese and other Asians on the vessel survived the shipwreck. Six of the survivors managed to travel to the nearby island of Tinian and from there to Guam, where they were able to use a native Chamorro outrigger to reach Samar and then Manila six months later.

The merchandise carried by the vessel cost approximately four million pesos, which was an extremely valuable cargo if one considered that many other galleons of 700 to 1,000 tons, carried cargoes valued at about two million pesos. While much of the galleon's remains were removed by the natives of the island over the years, in 1684 the Spaniards were able to salvage thirty-five of the thirty-six cannons the galleon carried, as well as seven of her eight anchors. Remains of the galleon including many bits of pottery shards had been strewn across the sandy areas of the reefs with much of it probably carried off or broken up into pieces over the years by the waves.

Background Leading Up to the Disaster

It should be noted that the Manila galleons had been sailing to New Spain (Mexico) since 1565 when the first galleon the *San Pablo* sailed from the island of Cebu to Mexico. Aboard that ship was the renowned navigator, Fray Andres de Urdaneta, who was able to locate the return sea route that would connect the Philippines to Mexico and provide a course for future galleons to follow. This had been a problem that had puzzled many Spanish pilots in the past, but Fray Urdaneta's new sea route meant that galleons could ply the Pacific from East to West and vice versa without too many difficulties. Fray Urdaneta had in essence discovered the sea currents that flowed from Japan to North America. As a result of his discovery, as many as three

to four galleons began making the annual journey from Manila to Acapulco during the latter decades of the sixteenth century.

The galleons were mainly constructed at the port of Cavite. Once they were loaded with cargo, they formed the trade route which lasted from the sixteenth to the nineteenth centuries. By doing so, they had in turn, connected the Philippines with the New World of the Americas and the Old World countries in Europe. It was through this trade that Oriental goods began flooding markets in the Spanish settlements of the Americas and in Peru. The Oriental merchandise became popular in those regions and was highly sought after by eager customers, who were fond of anything from the Orient, be they silks and fans or soup tureens and trinkets of every sort, as long as they came from the exotic countries of the East.

The arrival of the Manila galleon was a joyful event for the people of Mexico. They looked forward to buying the many goods she brought to the Acapulco Fair every year. Obviously, the ship had to be commanded by experienced officers and mariners in order to ensure that she actually arrived in Acapulco. It was up to the Spanish governor of the Philippines, assigned to that post by the Spanish king, who had the ultimate jurisdiction over the appointment of the commanders of the galleons. For a price, he often appointed an individual to the esteemed position of a galleon's captain-general based on his own personal whims. At times, the individual selected for the appointment was a government employee or one of the governor's relatives. In other cases, the individual was someone that the governor felt merited the appointment even if that individual had no nautical experience to speak of. In any case, many of the candidates interested in serving as a galleon's captain-general often paid a sum of money to the governor for the position.

But in the case of the *Nuestra Senora de la Concepcion*, the individual selected to command the flagship, as its captain-general, was the twenty-two year old nephew of Governor Sebastian Hurtado de Corcuera (1635-1644). However, it should be noted that while the captain-general of a galleon could have had a military or naval background, the persons who were actually in charge of operating and managing the galleon were the ship's master and the chief pilot. The captain-general's role on the ship was often more of a figurehead unless he actually had a naval or military background. However, as the ship's master, Juan de Montoya, was also hand-picked by the governor, it is difficult knowing how qualified he was to manage the galleon.

The nephew and the ship's master were chosen by the governor to ensure that his own property and that of his family and friends was protected and arrived in Acapulco where it was most probably to be

sold. Included in the governor's property on the ship was a gold plate and ewer shipped to Manila from the king of Spain as a gift for the emperor of Japan. The two valuable items were never sent to the emperor and instead remained in the governor's possession. He was shipping these two items along with other merchandise all tagged as his personal possessions to avoid customs duties or detection of his having illegally appropriated the two gifts.

The galleon carried a chief pilot and at least two assistant pilots to control the ship's navigation. Having these pilots on the vessel was a main priority for all galleons of the time, and it was a regulation which was always maintained. The pilots would have been selected based on their ability and past experiences as navigators, as the vessel's successful voyage depended on their knowledge and skills. The *Nuestra Senora de la Concepcion* should not have been anywhere in the vicinity of Saipan, as it was far off course from the northerly direction the galleons normally followed to Acapulco. It was only the returning galleon from Mexico that usually anchored for provisions at the Marianas when it sailed to Manila. The galleons never went out of their way to stop in the Marianas on the journey from the Philippines to Mexico, so the galleon was off course and this was probably due to the weather, winds, and neglect by the pilots due to the disturbances on the ship.

It is interesting to note that during the years prior to the loss of the *Nuestra Senora de la Concepcion*, an acrimonious controversy had erupted in Manila and in Mexico City concerning the cargoes shipped aboard the Pacific galleons and sold in Acapulco. During the initial years following the conquest of the Philippines by the Spanish conquistador, Miguel Lopez de Legazpi in 1571, the archipelago was able to enjoy a free trade with New Spain and Peru until the early 1590s. At the time, difficulties arose concerning the tremendous infusion of Oriental goods into the Americas. The large numbers of Asian exports sold in Mexico was viewed as an intrusion into Spain's trade monopoly in their New World settlements. The Seville and Cadiz merchants began voicing their opposition to the cargoes brought to Acapulco by the galleons.

The merchants of Seville and Cadiz were successful in obtaining restrictions on the trade between the Philippines and New Spain. But the restrictions were frequently violated and this, in turn, led to the Seville-Cadiz merchants' requests for greater controls on the importation of Asian goods, and particularly those from China, into their settlements in Central and South America. These same products were purchased by merchants at the Acapulco fair, which were then transported to other settlements in Central and South America. As a result of this trade, the Spanish merchants noticed a loss in their

profits especially in their South American markets. They petitioned the king and Spain's central government, asking both, for the passage of a regulation to curb the Manila galleons' trade into the Americas.

As the Spaniards in the Philippines were continuously settling within greater areas of the archipelago, Spain was in turn, selling larger quantities of Spanish and European made products to buyers in New Spain in Central and South American markets. The business was thriving by 1585 with Spain's Atlantic galleon fleets returning to the peninsula loaded with cargos of indigo, tobacco, cacao and precious metals such as silver and gold through their ports in Veracruz, Nombre de Dios and later from Porto Bello, as well as in Cartagena de las Indias in Colombia. The thriving export-import business carried on by the Seville-Cadiz merchants was disrupted by the Manila galleon trade. The galleons and the goods they brought to Mexico from China, India, Japan and other Southeast Asian countries were sold at lower prices than those provided by merchants in Spain. They realized that they soon would be put out of business if the Manila galleon trade was not regulated.

As Manila became a central depository for goods from Asia, it was becoming clear that a multitude of Oriental products were becoming highly sought after by customers in New Spain and South America. The galleons carried an assortment of fabrics and silks, both raw and embroidered with various designs, textiles from India and the Philippines, precious gems such as rubies and sapphires from Siam, numerous porcelains decorated with Oriental motifs, furnishings for the home including everything from Chinese screens to dainty teapots.

The complaints were heard and acted upon. New regulations were passed in 1593 stating that the merchants of New Spain and Peru were no longer allowed to ship goods from Manila to Acapulco on an unrestricted basis. The king issued a royal order stating that only two galleons were permitted to make the journey each year with one galleon sailing from Manila to Acapulco and vice versa. An additional galleon was to remain at the port of Acapulco in reserve.

Their agents in Manila were also prohibited from shipping unrestrictedly from the Philippines on behalf of the buyers in the Americas. From then on only Spanish residents of Manila were allowed to ship on the galleons, which were restricted to a carrying capacity of 300 tons each. The value of the cargo was limited to 250,000 pesos per ship's cargo and in return the silver to be returned to Manila in payment of the goods sent to Acapulco the previous year could not exceed more than 500,000 pesos. Additionally, the 1593 law stated that Oriental goods shipped from Manila to Acapulco could only be sold and used in New Spain after paying the appropriate customs duties. The Oriental goods could not be trans-shipped to the

Tierra Firme Spanish settlements in South America or to any other ports in the Caribbean. The law indicated that any goods found not adhering to the law would be confiscated and the individuals involved prosecuted. When the merchants in Manila received news of the new trade regulations, they were incensed by the restrictions. They instead began to undervalue the cargos they shipped to Acapulco on their invoices and continued to ship larger quantities of goods thus ensuring that they received ever increasing profits.

Every Spanish sea vessel from the sixteenth century onwards was required to carry a ship's register or manifest. In this document, all of the names of the individuals on board the vessel and the cargo and provisions the ship carried had to be meticulously recorded, as well as data on the number of officers and crew members, births and deaths which occurred during the voyage. The reason for documenting the cargo was so that the customs officials, in Acapulco or in any Spanish port for that matter, would be able to levy customs duties upon the registered goods mentioned in the ship's register. The funds received from the duties were turned over to the Royal Treasury. Any undocumented merchandise was confiscated. Only the personal belongings of the officers, crew and passengers could enter a country free of customs duties.

This was a regulation established by the House of Trade in Seville for vessels in Spain, the colonies in the Americas and also applied to the Manila-Acapulco galleons. But in the case of the *Nuestra Senora de la Concepcion*, Governor Corcuera allowed the vessel to sail without this very important document. Apparently, this was the governor's way of protesting the activities of a special royal customs inspector in Acapulco who was carefully checking the cargoes of every incoming galleon. The royal customs inspector, Pedro de Quiroga, was especially assigned in 1635 by Philip IV to investigate the ongoing trafficking of unregistered and smuggled goods brought to Acapulco in the cargo holds or hidden on the galleons by Manila merchants.

Pedro de Quiroga was a no-nonsense sort of person who was determined to get to the bottom of the trade irregularities in Mexico, and to address the concerns of the Seville/Cadiz merchants. His arrival on the scene created a disturbance amongst the Manila/New Spain merchants as Quiroga began to rigidly enforce the regulations concerning the galleon trade. For a time the trade run itself was halted by the merchants in Manila, but when Quiroga was recalled to Spain, the galleon traffic began anew, but with less cargo sent to Acapulco from Manila. Although only two galleons were allowed to sail the transpacific route, irregularities continued where the cargo was concerned.

It had become the accepted practice for investors in the trade run

who were shipping merchandise on the galleons, to load additional unregistered cargo onto the ships in a bid to increase their profits. The customs officials in Acapulco normally turned a blind eye to these activities as part of adhering to a kind of "gentleman's agreement," whereby it was an insult to question the validity of a Spanish gentleman's personal effects which were stowed in the galleon's hold. If the gentleman claimed that the goods were his personal possessions, he expected the customs officials to honor his word. As a result, many smuggled unregistered goods entered Acapulco and were later sold at the trade fair in the port city.

The officers also carried merchandise on the ship for sale in Acapulco, which they claimed as their own personal possessions. They knew that they would not have to pay customs duties and taxes on these items. Apparently, they were all trying to circumvent the customs regulations in order to earn some extra money. Even sailors carried some bit of merchandise in their trunks, which they planned to sell in Acapulco. But the bottom line was that by allowing a vessel to sail without a ship's register could essentially be viewed as a revolutionary act on the part of the governor who was basically snubbing the government's regulations as a sign of protest. The matter would certainly be reviewed at a later date during an investigation into the loss of the *Nuestra Senora de la Concepcion*.

Questions concerning the amount of cargo shipped to Mexico by the Manila galleon came under scrutiny once again during the early part of the eighteenth century. The merchants of Seville and Cadiz began to protest about the cargoes brought to New Spain on the galleons, which were still undercutting their profits in the Americas. On January 27, 1714, the Consulado of Seville (Chamber of Commerce) informed Philip V that they objected to the imports from China, which they claimed were destroying their own silk manufacturing industries in Spain. A royal edict was passed by the king in 1718, forbidding the galleons sailing from the Philippines to the Americas from carrying silks and other fabrics for sale in the Spanish settlements of New Spain or Tierra Firme (South America). Instead, they were to only carry Philippine products, which were so few in number that they could hardly fill one vessel.

Another edict of October 27, 1720, listed the type of products the galleons from Manila were allowed to carry to the New World settlements, which included cinnamon, cloves, wax, linens, and calico, shawls, untwisted silk, rigging and cordage. When the news of the king's edict arrived in Manila on August 2, 1722, the Spaniards and Chinese merchants in the city were enraged by the new regulations. The officials of the Spanish government in Manila and the heads of various religious orders began lobbying the king to reverse the edict

as it basically destroyed Manila's trade upon which the Spaniards in the country had come to depend for their livelihood. Eventually the king reversed the edict on June 17, 1724, as he had become convinced that the Manila trade contributed to the Obras Pias (charities), which was a main source of funds for the operation of convents and missionaries in the country.

In 1734, another royal law increased the value of the cargo which Manila could ship to Acapulco to 500,000 pesos from its previous figure of 250,000 pesos. In return, the galleon embarking from Acapulco to Manila could carry one million pesos in payment for the goods sold in Mexico, as well as the yearly subsidy of 250,000 pesos used to maintain the government in Manila.

Returning to the *Nuestra Senora de la Concepcion*, the problem of shipping contraband goods on the galleons did not disappear overnight. Governor Corcuera's shipment of illegally obtained cargo to New Spain aboard the galleon was apparently typical of the activities of governors in the Philippines who tried to enrich themselves by selling their own goods in Acapulco.

The Investigation of the Shipwreck

During the investigation of 1644 by the Spanish government in Manila, it was revealed that the reasons for the disaster may have had its origins in the capital even before the galleon had a chance to begin its journey to Acapulco. The members of the investigation commission inquired into former Governor Corcuera's activities in the Philippines and his role in the loss of the galleon. Fifty-nine charges were brought against him. It was uncovered that the governor was habitually shipping his own cargo to Mexico on the galleons. These goods or clandestine cargo usually consisted of jewelry, gold and other items that he had received during his time as governor of the Philippines. He was in a position to grant appointments and special favors to government functionaries and to individuals seeking a particular position or favor from him in return for gifts of merchandise or cash.

He was also charged with inappropriately appointing his young and inexperienced nephew as the commander of the *Nuestra Senora de la Concepcion*. It was, according to the investigators, apparent that the young man's lack of naval experience had contributed to the loss of the ship. It was also discovered that the galleon had been at sea for just a few days, when the officers and crew members realized that the nephew lacked naval or military experience. This, in turn, led to the nephew's inability to command the vessel or earn the respect of the officers and crew who realized he had no clue how to manage the galleon. Whatever orders he gave out to his officers were disregarded and discipline aboard the galleon began to disintegrate. Violence broke out with one group of men attacking the other and wounding

and killing of some members of the ship's crew. As a result of the mutinous actions of the crew, little attention was paid to the ship's navigation as it approached the island of Saipan

Former Governor Sebastian Hurtado de Corcuera had arrived in Manila in June 25, 1635 to assume his new post as the governor-general of the Philippines. His official title in the Philippines was, Captain-General of the Philippines and President of the Royal Audiencia. When he arrived in Manila, he brought many soldiers from Mexico for the military garrison's located across the archipelago. Prior to this appointment, he served as the Governor of Panama from 1632 to 1634. He was originally from Burgos, Spain and was a distinguished military officer. As a result, he was knighted by the king and given the title of Knight of the Military Order of Alcantara. He also served in the Spanish military for a number of years and was actively involved in military matters in Flanders. When he first arrived in the Americas, he was appointed to the position of Master of Camp in Lima's port city of Callao.

Although he had a stubborn streak, he was known as a man with a great deal of energy. During his term of office as governor, he was considered a controversial figure who was involved in several disagreements especially with the Archbishop of Manila, Msgr. Hernando Guerrero and other religious groups operating in the country. The first area of contention arose when Governor Corcuera enthusiastically tried to put into action a plan to send missionaries to China and Japan. When he tried to rapidly implement the plan, the archbishop objected to the proposed mission saying that it should first be supported by papal order and a clearly specified idea of what the mission entailed.

Another problem arose when a soldier murdered his common law wife and fled to the sanctuary at San Agustin Church. Despite the refuge the church provided this individual, the governor ordered his arrest. The clergy demanded that the culprit, who sought sanctuary in their church, be returned to them, but the governor refused their request. The archbishop then censured those involved in the arrest of the man. Governor Corcuera immediately voiced his objections to these measures, but ultimately sent his apologies to the church officials for having violated their laws of sanctuary.

Later, the archbishop reprimanded the Jesuits for what he claimed were activities not approved by the church. Governor Corcuera became involved in this dispute and ordered that the notary of the Holy Inquisition in Manila be arrested. At the same time, the governor also interfered in the appointment of a priest for the parish of Santa Cruz. Both issues once again resulted in another conflict between the archbishop and the governor. To cap the situation, the governor

ordered the arrest of the archbishop and exiled him to the island of Corregidor in Manila Bay. He also asked the Manila Cathedral to select a new archbishop. But in the end, the governor had to relent in this matter and released the archbishop from his imprisonment.

While he was also governor, Corcuera received news of Muslim actions against the Christian-Spanish settlements in the Visayan Islands of the Philippines. It was claimed that at least 20,000 persons had been abducted by the Muslims over a thirty year period. These individuals were often captured as slaves and sold to third parties in Asia. A Royal Decree was issued by Philip V on February 16, 1636 ordering the pacification of Mindanao to ensure the safety of the settlements in the Visayas. However, the Spaniards were unable to fully control the Muslim held island.

Although the governor had already been involved in increasing the defenses of the colony, in order to comply with the king's wishes, he added a new unit to take part in an expedition to Mindanao. The division was known as the Cavalry Corps, which became a permanent unit of the Spanish army in the Philippines. Governor Corcuera asked the king for permission to convert any captured prisoners into slaves. This request was turned down as Manila's religious orders thought that the measure was criminal and immoral. The king, in any case, refused Governor Corcuera's request as he stated that the people of the Philippines were part of the Spanish realm and as such, they were to be treated under the laws of Spain.

The governor was ordered to set up local governments in the various islands of the archipelago, similar to those of Castile and Leon, Spain. But this measure was more difficult to implement as the Muslims had their own religion and did not recognize the doctrines of Catholicism. Mindanao had been an independent island set apart from the Spanish portion of the country long before their arrival in the archipelago in 1565. As the Spaniards were not able to live amicably with the Muslims, they turned to war as a solution to their differences. As a result of these difficulties, Governor Corcuera was instrumental in sending military campaigns against the Muslims from 1636 to 1638.

Another conflict, which occurred during Governor Corcuera's term of office, involved a Chinese revolt against the Spanish government. The Chinese residents were protesting several issues mainly concerning tax collection and a decree issued by the governor regarding the labor which the Chinese were forced to provide to the government. The Chinese in the province of Laguna revolted against these measures in August 1639. The revolt spread to other areas and many were killed in the process by Spanish forces. By March 1640 the revolt was put down with thousands of Chinese perishing in the conflicts. Of thirty thousand Chinese then living in the Philippines,

seven thousand surrendered to the Spanish forces for their role in the revolt.

Regarding Governor Corcuera's involvement with the Manila galleons, he noticed that many merchants who participated in this trade managed to avoid the stringent restrictions placed upon the ship's cargo. Back in 1635, traders in the Spanish cities of Seville and Cadiz had been successful in the appointment of a commissioner to monitor violations of the trade laws. The commissioner managed to operate his duties so successfully that for a time no cargo was dispatched on the Manila galleon to Acapulco and in 1637 just one small boat sailed to Mexico. The merchants in Manila protested the commissioner's activities and on September 30, 1639, a royal edict stated that after measuring, weighing and inspecting a galleon's cargo, it could not be interfered with unless there was a complaint indicating that the value of the cargo was greater than allowed by law.

Eventually, Corcuera was replaced by Governor Diego Farjardo y Chacon, Knight of Santiago on August 11, 1644. One of his first duties was to initiate an investigation into the activities of the former governor. The investigation was known as the "Residencia," which was the standard practice at that time when one governor replaced another in the colonial government. His second act was to order the arrest of Corcuera, who was imprisoned at Manila's Fort Santiago.

As part of his punishment for the loss of the *Nuestra Senora de la Concepcion*, Corcuera's property was confiscated and his household servants were dismissed. Moreover, his friends and associates were sent into exile. As Corcuera faced a number of charges brought against him, he was confined in prison for five years. He was released by a Royal Order from the king and fined 25,000 pesos for his criminal activities of shipping clandestine goods to New Spain. As he was a royal favorite, he returned to Spain where the king tried to compensate him for all he had undergone by appointing him to the position of governor of the Canary Islands in 1659. Once in the Canary Islands, he carried out his duties there until his death in 1660.

In 1684, the Spanish government in Manila sent a salvage ship to Saipan to recover the *Nuestra Senora de la Concepcion's* cannons. By that time, most of the other cargo had been scattered along the reef where it was broken up or washed away by waves or taken by the Chamorros. When the Spaniards arrived in Saipan they spotted gold chains decorating one tree. As for the *San Ambrosio*, on its return journey to Manila the following year in 1639, she was shipwrecked off the coast of northern Mindanao. The vessel was off course, perhaps due to stormy weather in the area. The ship normally would have entered the Philippine archipelago through the San Bernardino Strait far to the north of where she was destroyed.

The Discovery of the Shipwreck Site by Archaeologists

The archaeological team involved in the discovery and underwater excavation of the *Nuestra Senora de la Concepcion* shipwreck was managed and organized by project leader William Mathers. His team of thirty men and women excavated the site during the years of 1987 to 1988. The individuals involved in the excavation encompassed a number of professions including archaeologists, artifact illustrators, marine biologists and divers. During the team's excavation of the site, the divers dove down repeatedly to the site in order to retrieve the many artifacts they found at the galleon's resting place.

The excavation site was systematically marked out by the archaeologists. "Interpreting the preliminary site survey, the planners decided to excavate a primary search zone, a square kilometer of the reef along the Agingan shore (of southern Saipan), between the high water mark and depths of 75 meters. Using a grid system, they laid 50 meter transect lines across the seabed. In pairs, they investigated 5 meters on both sides of the lines, visually and with metal detectors. When the swath was completed, they shifted the transect 10 meters to one side, parallel to the previous line, and repeated the process. "[1]

Many of the artifacts they discovered served as reminders of what life was like for the Spaniards aboard a seventeenth century vessel. The remaining artifacts also provided an insight into the types of cargoes carried by the galleons during that time period. Artifacts such as a small gold shoe studded with forty-one diamonds may have been a perfume container belonging to one of the wealthier Spanish ladies aboard the ship. Thirty-two gold chains were uncovered twisted together with gold wire which may have been part of a merchant's goods to be sold at the Acapulco fair.

"To find and retrieve the remains of the *Nuestra Senora de la Concepcion* from the deep and reconstruct her story required detailed planning, state-of-the-art equipment, proper excavation techniques, constant vigilance, enormous muscle, persistence and commitment. The crew of the *Tengar* dove in pairs, completing more than ten thousand dives over two seasons of excavation. Initially, they moved literally tons of coral rubble in their search for the lost galleon. In remote crevices, they found exquisitely wrought gold pieces and intricate jewelry set with gems, precious examples of Renaissance artisanship. Dozens of the stoneware storage jars found in deeper waters attested to the durability of the trade, having like the trade itself, the staying power of centuries. Hundreds of other finds further stimulated intriguing questions about life and commerce in this historical period. The challenge became a technical one of how, with minimal damage, to bring this submerged past into light of the present."[2]

Attesting to the fact that many jars were used to carry water, spices, provisions for the ship's crew, as well as serving as packing vessels for other goods such as porcelain, about 156 storage jars were found at the galleon site. Most of these weighed about one hundred pounds each and originally were produced in Southern China, Vietnam and in Thailand. One jar, which was found at the site was apparently of Spanish origin and may have contained at one time, olive oil or wine. In another jar a resin was found which may have been used in the production of perfume. Writing on some of the jars in Spanish, Chinese and Tagalog indicated that they held vinegar, salt, sulfur and saltpeter. Most of the jars carried on a large galleon would have been used to store water as carrying water for the long journey of six to seven months to Mexico would have been of paramount importance for the survival of all those on board the ship. It was not unusual for a galleon to carry as many as 1,000 earthenware storage jars of water for the journey. When empty, the jars were not discarded, but refilled with sea water to use as ballast.

Jars also carried the provisions of the wealthy Spaniards and officers on the ship. These included wine, olive oil, olives and vinegar. The Spaniards were in the practice of putting their initials or other distinguishing marks on their jars to identify them in the ship's hold. In the case of the *Nuestra Senora de la Concepcion*, two jars were found fused together after hundreds of years of being under the sea. They showed that they belonged to two owners and had markings of identification on them. One mark is of an anchor and the other of the individual's initials.

A huge number of gold and brass buttons were found, 997 in total, some fancily made with a filigree design and most probably to be sold throughout New Spain. Thousands of these buttons were made by Chinese and Filipino craftsmen in China and in Manila for the export market. A small dainty gold comb was discovered which probably belonged to a Spanish widow who lived in Manila in 1634, Dona Catalina de Guzman. In many galleon shipments, combs were sent to Mexico in great amounts and seemed to be a favorite export item. They were made of ivory, gold and tortoiseshell. One 1767 galleon the *San Carlos*, carried 80,000 Chinese combs as part of its cargo.

Other artifacts included silver sword pommels, a Chinese bronze weight, and cannons with dolphin rope holders, Chinese glass beads, ornate brass tacks with gold leaf probably used on furniture and many pieces of pottery. At the excavation, as many as 1,300 pieces of gold jewelry were uncovered which included everything from gold chains mentioned above to rings, brooches, crucifixes to pieces set with precious stones of diamonds, sapphires and rubies.

The galleon would have carried many items that did not survive the

hundreds of years of being exposed to the elements under the sea. These included the wooden parts of the ship such as its hull, frame and deck planks. Other items which also could not survive destruction under the sea included large quantities of silks and other textiles, wooden items such as lacquered boxes, screens, furniture taken aboard the ship in pieces, which would have been re-assembled like puzzle pieces once they arrived in Acapulco, as well as smaller trinkets which were sold in their hundreds in the markets of the Americas.

“Recovery of artifacts from shipwrecks can result in a rapid corroding of metals, flaking of pottery and disintegration of other materials because, after being buried for hundreds of years, artifacts reach a state of equilibrium in their ocean habitat, and if they are removed abruptly from the environment, they may deteriorate quickly. The immediate intervention of professional conservators is required. ”[3]

Buyers of Oriental goods were often fascinated and intrigued by their purchases and the intricacies and ingenuity of the producers of these items in Asia. As mentioned earlier, many of the artifacts had since disappeared as natives carried away the remains which washed up onto the shore or lay in the shallow waters of the reefs of Saipan. Other items simply disappeared or were scattered by the movement of currents and the motion of the waves.

Chapter 2

Spain's Network of Trade Galleons

The Manila-Acapulco galleons evolved from a larger network of traditional Spanish merchant trade vessels operating out of Seville and Cadiz, Spain. The ships sailed annually in convoys to their colonies in the Americas. To manage and control the vessels of the Atlantic fleets, the Spanish government established a highly bureaucratic system of laws and regulations to govern the ships, cargoes, provisions, equipment, weaponry and the crews that sailed upon them. This same arrangement was used to regulate the activities of the Manila-Acapulco galleons. This vast bureaucracy controlling the Atlantic fleets and the Pacific galleons was managed by the House of Trade (Casa de Contratacion) based in Seville.

As the city which gave birth to the Atlantic and Pacific galleon trade runs, Seville was one of the most ancient cities of Europe. With a diversified history spanning hundreds of years, the city had its share of invaders. Archaeological remains indicate that it was once occupied by the Romans who called her "Hispalis." While they lived in the area, they built an aqueduct and left other monuments in the region serving as archaeological evidence of their presence in this part of Spain. The Romans were replaced by the Vandals and Visigoths in 409 AD. Later, the Moors (Muslims), as they were referred to then in Spain, settled in the area in 712 AD. The Moors called their city "Isbiliya," from which the name of "Seville" was derived. The city was eventually captured from the Moors by the Spanish monarch Ferdinand III in 1248 and officially renamed "Seville". King Ferdinand III remained in the city until his death on May 30, 1252. The Muslim way of life in its culture, arts, and architecture was visible in the sixteenth century, as it is today, and serves as a reminder of the rich heritage they left behind in the city.

After Christopher Columbus' discoveries in the Americas in 1492, the city of Seville was granted a monopoly over its trade with the territories in the New World. Columbus traveled to the Caribbean aboard his flagship the *Santa Maria*, a carrack with three masts and a carrying capacity of 300 tons. He arrived in the West Indies after a sixty-nine day journey and was accompanied by two smaller vessels the *Pinta* of 50 tons and the *Nina* of 40 tons. The discoveries led to a hive of activity between Spain and its New World settlements with the southern port cities of Seville and Cadiz reaping the windfall benefits of this new trade.

Seville became a center of immeasurable wealth through this

commerce, but a number of setbacks led to a gradual decline in the economic activities of the city. This was primarily caused by a plague, which struck the city in 1649 killing almost half of its population. Another major impediment to the city's commercial activities was the fact that over the centuries its main river, the Guadalquivir, had silted up and was no longer capable of handling larger and heavier vessels. The merchant ships had no choice but to use the port city of Cadiz for their activities from 1717 onwards. As a result of the shift from Seville to Cadiz, the port city dominated the overseas trade with the New World colonies, taking this monopoly away from the city of Seville.

While it held sway over the commercial trade with the Americas, Seville was one of the busiest cosmopolitan cities in Europe. It was the place to travel to for work opportunities and to find positions available in a multitude of occupations and especially for seafaring jobs. One could be hired, if qualified, to work as captain or pilot on a merchant vessel or as the commander of a warship galleon. The government owned warship galleons, accompanied the merchant vessels, in the Atlantic fleets during the long voyages across the ocean to the Caribbean. Their main purpose in the fleet was to protect the merchant vessels in the convoy, as well as to transport precious cargoes such as silver to the Royal Treasury in Spain from the Americas.

As one of the main cities of Andalusia in southern Spain, Seville was a sister city of other Moorish enclaves located in the region such as Cordoba and Granada. Mariners from throughout Europe assembled in Seville in search of employment on one of the many ships under preparation for their next voyage to the New World. Many individuals came to Seville from Italy, the Greek islands, Flanders and all parts of Spain in search of work on the ships or in one of the service industries aligned to the busy seaport. There were neighborhoods in Seville where many seafaring folk lived and were involved with the ships in one way or the other, either catering to them by providing provisions or equipment or working on them as officers and sailors.

Serving as a magnet luring many unemployed individuals to the thriving city, Seville became a commercial success through the merchant fleet system. It was also one of the most populated cities in Spain by the late fifteenth century. The growing population was necessary to construct and supply the many trade and military vessels, which embarked from Seville and Cadiz to the New World ports. The city also had to supply the man power for the many positions in the administration of the New World settlements. There was a constant need for government functionaries, military officers to command naval ships, crews to man the sea vessels, soldiers and officers for the overseas military garrisons, priests and friars to convert the natives

they encountered abroad to Christianity and merchants to organize and set up businesses in the colonies.

Jobs were plentiful and word soon spread across Europe that Seville was a booming commercial and administrative center of activity. Under royal patronage, Seville became the Spanish king's main economic center in Spain. The region of Seville and its surrounding farms produced a number of agricultural products such as wheat, as well as wines and salted fish. These products were sold throughout Europe, but also were produced in abundance to provision the ships of the Atlantic fleets.

The main hub for the mariners who worked on the vessels was the waterfront neighborhood of *Triana*, which was named after the Roman Emperor Trajan. There, they lived in small inns and boarding houses while awaiting their next job on one of the galleons. The route the galleons traveled along to the Spanish settlements in the Americas became known as the "Carrera de Indias" (the Indies road). For many men who traveled on these ships in one occupation or the other, it became a livelihood they turned to time after time in order to feed their families in Spain and in other European countries.

The Carrera de Indias followed a route taking advantage of the Atlantic Ocean currents and sea breezes allowing the vessels in the fleet to travel from Cadiz to the Canary Islands. Upon arriving in the Canaries the merchant vessels and the military ships which accompanied the trade vessels anchored there for a time to take on additional water and provisions for the sea voyage across the Atlantic. The passengers and crew aboard the vessels had a short reprieve before the fleet set sail once again to their final destination of the Lesser Antilles and the Caribbean.

Obviously, financing the operations of a massive merchant and military fleet required enormous sums of money to pay for the construction of the ships, the hiring of crews, the provisioning of the vessels, the purchasing and loading of the cargos they carried, the weaponry and ammunition the military ships required and cannons. During the sixteenth century a number of bankers were operating in Seville providing the financial funds needed for these ventures. The bankers had been providing their services in Seville as far back as the medieval days in the thirteenth century and they were not all necessarily Spaniards. In fact, many of the bankers were foreigners such as Italians and especially the Genoese, who were operating in Andalusia after the Spaniards regained control of the region, and ousted the Moors from the territories they controlled. The foreign bankers provided a host of financial services including letters of exchange, insurance and loans.

Seville's Exports to the New World Settlements

Seville and its surrounding areas were in a position to export many locally produced products to its New World settlements, as well as to buyers in other European cities. No doubt many of the products made their way into New Spain and eventually to the Philippines. The city was historically known as a major producer of agricultural products such as olive oil, wines and wheat flour. As far back as the Roman period of occupation of Spain, the region was already recognized for its agricultural products. During the Moorish period and into the sixteenth century, these products were exported through a trade network to London, Flanders and Genoa. Interestingly, it was the Italians and specifically the Genoese, who were the primary merchants in this trade and who were involved in selling almost the entire stock of agricultural products then available.

Commodities such as olive oil, was stored in large oaken vats and kept in warehouses in Seville, which were known as "Almacenes." The use of olive oil in Spanish cuisine is well known around the world and during the sixteenth century it was often used in food preparation, but astonishingly it was also used in the production of soap. During this time period, Seville became the center for soap production in Spain where it was in great demand. It was also exported to markets throughout Europe and to the Americas. Known as "Jabon de Castilla" or Castile Soap, the soap was made using plant ashes boiled with olive oil instead of tallow to produce a hard white soap with the capacity to harden as it aged.

Another major product, in great demand, was wheat and flour which was exported to the New World settlements. Seville and its surrounding areas also became well known throughout the ages for its production of wines and the "Sherries of Jerez." Again, the Genoese were the primary dealers serving as wine merchants. Many products were easily purchased in Seville during the sixteenth century such as spices and sugar. The sugar came from sugarcane fields in the Portuguese held Atlantic islands of the Azores or from the Spanish territory of the Canary Islands, which in turn, was sold in Lisbon along with spices to merchants for European consumption. It was the Genoese who appear to have been the main traders of spices in Seville.

Textiles proved to be another major export provided by Seville merchants, and these were manufactured on more than one thousand looms located in the region. As the demand for textiles grew and the suppliers were unable to meet the increasing demands of buyers, textile merchants began importing woolens from England as far back as the fourteenth century to boost their inventories. Two of the major traders in English woolens were the Englishmen, Thomas Maillard and John Day. Both merchants were based in Seville where they managed

their lucrative woolen trade business. Another important export product was cochineal, which was used in dyeing of cloth in the fifteenth and sixteenth centuries. The cochineal came from Spain and later from Mexico. It was a carmine pigment solution, which was released by boiling small dried insects (dactylopius coccus a scale insect) in water. During the boiling process the insects released the pigment (carminic acid). In Mexico, the insects lived on the nopal cactus and were harvested by the Spaniards.

Seville became a producer of leather goods which were sold in European markets and exported to the New World settlements. Leather boots, shoes, clothing and shields, were shipped to markets in the Americas where they were highly sought after by customers. Ceramic products, pottery, earthenware, household items were also manufactured in Seville and widely sold. In Seville's Roman period, the city was well-known for its ceramics and pottery industries. Another profitable business in Seville was book publishing. The city became a major producer of a variety of adventure, romance, ballads, and religious books. The books were sold in Spain and became popular exports to the colonies in the Americas, which in turn, made their way to the Philippines on the galleons.

Other exports from Seville included furniture for the home and used in churches, altar screens, portable altars, paintings with religious themes, and clothing with merchants selling everything from hats to hose. Numerous workshops operating throughout Seville produced a variety of supplies and equipment used on the galleons. These included the production of sails, rigging, ropes, iron and tin fittings, tools, weaponry, furnishings for the interior of the vessels, oak vats, kegs, barrels, crates and small boats. The items were used on the sea vessels, as well as in the homes of the residents of the city. The wood used to manufacture the variety of products produced in the workshops came from Spain, but much of it was also imported from England, Germany and Scandinavian countries. Ultimately, many of the products grown in and around Seville or produced in the many workshops located in the city, made their way as exports to the settlements in the Americas and the Philippines.

The Port City of Cadiz

Located south of Seville and on Spain's Atlantic coast, the port city of Cadiz has a fascinating and ancient history. As one of Europe's oldest cities, it has been continuously settled for many centuries by an assortment of inhabitants. Attesting to its ancient origins, Cadiz was founded in 1100 BC by the Phoenicians. They named it "Gadir," which meant "walled city," as it was originally enclosed by a wall which was interspersed by a number of gates. While the Phoenicians controlled the area, they were involved in commercial activities with the local

communities of the region. The city was later settled by the Greeks who renamed the city “Gadira” or “Gadeira.” It was given that name by the Greeks who, according to their mythological beliefs, claimed that the city had been originally founded by Hercules. After the Greeks, Cadiz was captured in 500 BC by the Carthaginians, only to be used by Hannibal as his headquarters to conquer southern Iberia.

In 206 BC, the Romans seized Cadiz. Their name for the city was “Gades.” Under Roman occupation, the city became a great naval port. Once again the city was under siege in 711 AD when it became a Moorish enclave until 1262. To the Moors, the city was known as “Qadis,” which was later changed to “Cadiz.” During the war to oust the Moors from Cadiz, the successful campaign was led by the Spanish King Alphonso X of Castile in 1262.

By the time of Christopher Columbus in the fifteenth century, Cadiz was beginning to flourish as a result of the vast wealth pouring into Spain from the Americas. As it underwent a renewal in vitality and usefulness to the Spanish Crown, it became a naval hub for the many ships sailing to the colonies in the Americas. This led to its becoming a primary target for raids by pirates. When pirates attacked Cadiz in April 1569, the city was set afire, but it managed to survive the enemy onslaught.

In 1587, the naval port was harassed by British vessels under the command of Sir Francis Drake. During a three day period, the British blockaded the Bay of Cadiz and the harbor. Their presence in the bay caused mayhem in the city as they destroyed many vessels and seized six ships. The city was once again confronted by the British in 1596. This time they were under the command of the Earl of Essex and Lord Charles Howard. After this conflict, a walled military fortress was constructed to protect the city from invaders and attacks by enemy vessels. The structure was known as the “Castillo de Santa Catalina.”

Another military fortification was added in 1672. At this time, Governor Diego Caballero de Illescas ordered the construction of a fortress the “Baluarte de la Candelaria” or Fort Candelaria. As the fortress was built in a section of the city which was located at a higher elevation, the soldiers posted there, had an unobstructed view of the Bay of Cadiz and any approaching vessels. The structure was armed with cannons which could be used against any invaders of the bay and the city. Another military fortification the “Castillo de San Sebastian” was added in1706. All of these military fortifications clearly indicated how important the city had become to the country’s naval and trade operations. The Spanish government needed to ensure its safety and that of its inhabitants and most importantly the galleons involved in the transatlantic commercial enterprise.

But despite all of the fortifications found in Cadiz, the British

returned in 1797 and 1798. In both years, they blockaded the harbor. Then in 1800, Lord Nelson attacked the city. Consequently, throughout its history, Cadiz had become a target for attack or occupation by foreign forces, as well as an object for capture by pirates, privateers and enemies of Spain who were primarily trying to steal the treasure they knew the galleons were carrying from the Americas.

In the eighteenth century, Cadiz became the main port city involved in the trade with Spain's colonies in the Americas. With its growing importance as the trade hub for sailing vessels arriving in Spain or going to the colonies, Cadiz came into its own as a cosmopolitan center. In many ways, Cadiz replaced Seville as the commercial center for trade with its new importance as a naval seaport catering to the many sailing vessels departing or arriving in Spain. As a commercial center, many foreign trade companies began operating in the city. Surprisingly, the Irish were one of the prime movers in the foreign business community of the city. As they were heavily involved in trade with the colonies, this led to their becoming quite influential in the commercial activities of the city. For a brief period of time, Cadiz also became the country's first capital. This occurred on March 19, 1812, when Spain's first constitution was formalized in the city.

House of Trade (Casa de Contratacion)

With the conquest of new territories and the establishment of numerous settlements in the New World, the Spanish government realized that it was necessary to set up an agency to oversee its commercial activities with the colonies. To manage the warship galleons and the merchant vessels a regulatory body was established by Queen Isabella in Seville on February 14, 1503. It was known as the House of Trade or "Casa de Contratacion." Through this royal enactment, a massive and highly bureaucratic system was created to completely organize and manage the commercial trade interactions within its overseas colonies.

Ultimately, it was hoped that the commercial activities in the New World settlements would greatly serve to benefit Spain's economic growth and prosperity. Vast amounts of wealth were pouring into Spain from the New World colonies and the government needed an agency to ensure that the royal coffers received their share of the wealth. All trade going to the New World colonies or returning to the peninsula was controlled and taxed.

The House of Trade had a number of responsibilities and these included: the management of the direct trade with the settlements in the Americas; the organization and selection of vessels involved in this trade and sailing to the colonies; the control of immigration of individuals from Seville and Cadiz to the new settlements, and the

enforcement and collection of customs duties and taxes within the colonies. Additionally, the House of Trade served as a repository for navigational information concerning the sea routes used by the galleons from Spain to the Caribbean, as well as travel routes employed within the overseas colonies. Another service provided by the House of Trade was the issuance of licenses to captains. Each captain was required to have a license if he planned to sail a vessel to the colonies. To handle correspondence between Spain and the colonies, the House of Trade set up its own postal service so that it could be kept informed of all events affecting trade in the Americas.

The House of Trade stored the ship's registers submitted to them by the captains of sea vessels. In order to provide a greater number of qualified pilots to handle the navigation of the various sea vessels under its management, the House of Trade established a school and training program for navigators and other officers such as captains who were interested in increasing their ability to navigate galleons. It also had the responsibility of issuing licenses to those individuals who were deemed qualified to trade with the colonies.

Another royal decree of July 1503 stated that the House of Trade was entitled to a number of additional privileges, such as the issuance of fines, the imprisonment of violators of its regulations and the receipt of bail payments. They were allowed to serve as a separate entity without having to adhere to the governmental rulings. Moreover, a decree issued in January 1505, provided the House of Trade with the permission to issue licenses without any restrictions. By this time, the House of Trade had become a powerful entity in the commercial activities between Seville and the New World colonies. By 1508, the Spanish government decided that Seville could not meddle in the affairs of the House of Trade. The institution's free reign, of course, created many disturbances within the community of commercial merchants in Seville. But despite this, as it received the royal house's seal of approval, it was allowed to operate the vast bureaucratic system without interference.

The House of Trade was also known as "La Casa y Audiencia de Indias." When it was established it closely resembled the "Casa de Guine" in Lisbon, which was set up by the Portuguese to control their foreign trade. It was empowered to control all aspects of overseas trade with the colonies in the Indies and also with any expeditionary voyages. It was a repository of information covering everything to do with the overseas settlements. The information it held was not available anywhere else. Moreover, the House of Trade administered the commercial trade with the colonies, as well as regulating who was allowed to travel to the overseas settlements.

The House of Trade was based in Seville, and as the trade

prospered, so did the city. Its population grew from 40,000 to 150,000 inhabitants by the end of the sixteenth century. Seville had become one of Europe's most important centers of commerce. At the time, it was a bustling city and was often referred to as a major gateway to the New World and as such, it was the third largest city in Europe after London and Paris.

The House of Trade operated from the sixteenth to the eighteenth centuries. By the end of the eighteenth century it had begun to lose its position of authority over the settlements in the Americas and it was finally eliminated in 1790.

The Council of the Indies (El Real y Supremo Consejo de Indias)

The "Council of the Indies" was established on August 1, 1524 to oversee Spain's colonial settlements. As an administrative agency of the Spanish government it had a number of responsibilities which included legislative, executive and judicial functions for the colonies of the New World. Through this agency, a vast network of bureaucratic paperwork had its origins to cover all aspects of the Spanish Empire's overseas settlements. The Consulate of the Indies maintained records on the commercial trade with the Indies and a registry of the Spanish merchants in Spain who were involved in this activity.

Prior to the establishment of this agency most of the contracts between merchants and trade with the Indies had been arranged on the steps of the Cathedral in Seville. This resulted in the need to surround the structure with a series of chains in order to prevent the Cathedral from becoming a center for the transaction of commercial activities rather than attending to the spiritual needs of the community. In order to control commercial negotiations in the city a special structure was erected to handle the requirements of the merchants and this was called "La Casa de la Lonja," which was opened in 1598. The building would later become the Archives of the Indies in the twentieth century. But in 1717, Seville's monopoly of the Indies trade ended as its operations were transferred to Cadiz. Although Seville lost its dominant role in the commercial activities with the Indies, it became exceedingly important when Philip V established his court in the ancient city during the years of 1729 to 1733.

The Atlantic Fleet System

To the Spaniards, the Atlantic fleets were known as "flotas." From the sixteenth century onwards, the fleets traveled once a year in a convoy of sea vessels to the colonies in the Americas. Sailing along a sea route, which departed from Seville or Cadiz to the Caribbean, the journey came to be known as the "Carrera de las Indias" or the "Road

of the Indies." It was the House of Trade in Seville, which controlled the convoys and cleared the ships for the sea voyages across the Atlantic. Initially, the New Spain (Mexico) and the Tierra Firme (South America) fleets sailed separately. The New Spain fleet sailed from Spain during the months of April or May. The departure date from Spain to Veracruz was an important factor in planning the voyage for the fleet as they had to arrive in Mexico well before the start of the hurricane season, which usually had its beginning by summer's end. Depending on the weather conditions, the voyage could take about forty days. The Tierra Firme fleet sailed to Cartagena de las Indias in present day Colombia, South America. The fleet sailed from Spain in either July or August and the voyage took about two months to complete.

The system of having two fleets was replaced by one large convoy, which sailed on a yearly basis from Spain. As the individual fleets were continuously threatened by pirates who were preying upon them, the House of Trade decided that the ships would travel in the larger convoy to defend themselves more efficiently. By 1526, the king had decreed that all vessels traveling to the Americas would be escorted by warship galleons. A special tax the "averia" was levied on the goods carried by the merchant vessels which were embarking from Spain to the Americas. This tax was used to finance the construction of the warship galleons employed in the convoys. By 1555, the averia tax was used to provide a convoy with an escort of four warships, but other fleets sailed with as many as eight warship galleons.

Although the process of organizing and provisioning the fleets of both warships and merchant vessels was an expensive undertaking, particularly for the Spanish government, it was an unavoidable expenditure. As the government needed the silver and gold brought to its coffers each year from the Americas to boost its own treasury, the safe return of the warships and merchant vessels was an absolute necessity. Occasionally the fleets were endangered by severe weather or by confrontations with the Dutch and English vessels which were always hunting Spanish treasure ships.

One major disaster the Spanish fleet experienced was an incident which took place in 1628. At that time, the treasure fleet was attacked by Dutch pirates. They were able to capture three of the galleons in the Spanish fleet of fifteen warships and merchant vessels. The warships carried a valuable cargo of silver and gold. The fleet had been sailing to Havana from New Spain, where it was eventually expected to join with other merchant vessels and armed warships for the return journey to Spain. It was commanded by Captain General Juan de Benavides. Due to his neglect, a number of warships and merchant vessels ran aground at Matanzas Bay, Cuba. This provided

the Dutch fleet, under the command of Captain Piet Heyn, with the perfect opportunity to attack the galleons and capture the Spanish vessels.

It was not the first time that Piet Heyn had encountered the Spaniards. As a young privateer, he was working on a vessel that was sailing through Spanish waters. The ship was attacked by the Spaniards and he was taken prisoner. For a period of time, he served as a galley slave for them. During an exchange of prisoners, he was freed and determined to seek out revenge against the Spaniards. From 1623 to 1626, he served as a Dutch admiral fighting for his homeland in battles against Spain. He sailed throughout the Caribbean attacking the Spaniards wherever he could. He sacked the port town of Matanzas and captured ships in the process. The Spaniards came to dread his presence in and around Cuba, as he posed a threat to their treasure ships. In 1626, he attacked a Spanish fleet of forty vessels unsuccessfully. When Piet Heyn encountered the Spanish fleet commanded by Captain General Benavides, he was in command of a massive fleet of thirty-two vessels which were manned by thirty-five hundred men.

On August 4, 1628, Heyn was cruising along Cuba's coast in hopes of encountering the New Spain fleet which was expected to arrive at Havana. In the meantime, Captain General Benavides sailed towards Havana, but learned that the Dutch were blockading the port. In order to avoid the enemy, Benavides decided to sail to the port of Matanzas where he planned to unload the cargoes carried by the galleons, and then sail out again to attack the Dutch vessels. As the pilots under Benavides's command were unfamiliar with the area, several of their ships foundered off the coast of Matanzas. While Benavides and his officers argued about what their next course of action would be, they were attacked by the Dutch. The entire Spanish fleet of fifteen ships fell into the hands of Piet Heyn. The Dutch destroyed half of the vessels by setting them afire, while the other ships were seized and taken to Holland along with the valuable cargoes they carried.

Another catastrophe was the loss of the 500 ton galleon the *Nuestra Senora de Atocha*. The *Atocha* was part of a fleet of twenty-eight ships which sailed from Havana in September 1622 for the return journey to Spain. When the fleet was caught up in the storm, eight of the ships including the *Atocha* tried to reach the Gulf of Mexico in order to evade the storm's strong winds. The attempt to safeguard the ships led to the loss of eight vessels. The *Atocha* was thrown against the reef of the Marquesas Keys, which is located west of the island known today as Key West.

The *Atocha's* hull was broken apart as it was dashed against the reef. She sank quickly. Another galleon the *Santa Margarita* was thrown

onto a sandbank two miles away from the *Atocha*. When the *Nuestra Senora de Atocha's* wreckage was found by numerous treasure hunters in the 1980s, they uncovered what turned out to be the most valuable shipwreck ever found. In addition to carrying a number of Spanish passengers returning to Spain from New World settlements, the ship had an extremely valuable cargo of silver, gold and Colombian emeralds, Ecuadorian pearls and Asian spices (most probably brought to the Americas by the Manila galleons). The founders of the wreck salvaged 41.7 tons of silver, thousands of Spanish coins, gold bars and hundreds of emeralds. The estimated value of the recovered items amounted to $400 million dollars in the 1980s. Much of the collection is now housed at the Maritime Historical Society of Key West.

In comparison to the Atlantic fleets, the Pacific galleon crossed the ocean unaccompanied by warship galleons. The Philippines-Mexican galleons were instead heavily armed to serve as both merchant and war vessels to protect themselves if the need arose. In Mexico, at times, when it was deemed necessary, due to a possible attack by an enemy ship found sailing in the area, the incoming Manila galleon was escorted from Baja California to the port of Acapulco by armed warships.

It was not uncommon for galleons arriving in the Philippines from Acapulco to be met by a vessel which was sent out by the Spanish governor in Manila. The vessel provided the services of a pilot who was able to guide the ship from the San Bernardino Strait to the port of Cavite. At times, it was also necessary to send out a vessel from Manila in order to warn the galleon's commander of the presence of enemy ships in Philippine waters. When this was the case, the galleon's captain was usually instructed by the governor to anchor the vessel at Samar and transfer its silver and cargo to a safe location on land.

The arrival of the *San Telmo* galleon from Acapulco in 1686, serves as an example of how the governor of the Philippines warned the ship of the presence of enemy vessels in the area. When it was discovered that British vessels had been spotted in the region, Governor Gabriel de Curuzealegui y Arriola (1684-1689), dispatched another galleon the *Santo Nino* to meet the *San Telmo* at the San Bernardino Strait. The *Santo Nino* was heavily armed with one hundred cannons and one thousand men. At that time, it was thought that the British ships might attack the galleon. The ships were indeed British vessels commanded by buccaneers Captain Swan and William Dampier. They initially sailed to Guam where they intended to intercept the returning galleon from Acapulco. However, as the *San Telmo* sailed closer to Guam, the captain of the galleon learned of the presence of the English vessels in the area, and immediately continued his voyage to

Manila.

Another method used to alert the captains of sea vessels of potential danger in the region was the use of fire and smoke signals. The fires were set up on high terrain along the eastern coasts of Luzon. The signal codes were developed by a Jesuit, Francisco Colin, to impart information to the galleons. As the Jesuits and their missions were often located along the coastal areas where the galleons normally passed by, they were in charge of operating the system.

The New Spain and Tierra Firme Fleets

While the "Junta de Armadas" (Council of War) planned the yearly fleets, it was the "Armada del Mar Oceano" (the Naval Fleet or Department of the Navy), that selected the warships which were to sail in the "Armada del la Guardia" (the Fleet of Warship Guards) escorting the merchant vessels in the convoy to the Caribbean. The convoys usually consisted of approximately thirty vessels, but at times the fleet sailed with as many one hundred ships. As the fleet was composed of both merchant and warship galleons, it was referred to as "armadas" (fleets). The Armada del Mar Oceano was composed of squadrons, which were headquartered in the Spanish cities of Seville, Cadiz, La Coruna, Santander and Lisbon, Portugal. In 1581, Philip II of Spain also became the ruler of Portugal, where he was crowned as Philip I. At that time, he was the reigning monarch for both Spain and Portugal. He became the head of Portugal after a question of succession arose in that country. The former monarch King Sebastian died in 1578 without an heir to the throne and as a result the crown of Portugal passed to Philip II. The country returned to Portuguese control in 1640.

The warships also accompanied the convoy as they returned to Spain loaded with vast quantities of gold, silver and precious gems from the Americas. The treasure was destined for Spain's royal treasury in order to fund its many projects including European wars. As a result, it was necessary to send heavily armed vessels with skilled officers, sailors and soldiers to combat any threats to their safe passage from the colonies to Spain. The warship galleons had served as Spain's main line of defense. As an example of how formidable the Spanish navy was in 1588, in the naval attack against England the Spanish Armada had consisted of one hundred and twenty ships. Of the total number of vessels employed in that particular campaign, twenty were warship galleons.

The warship galleons were heavily constructed and well armed to resist any attacks at sea. The weaponry they carried consisted of a number of long range cannons such as culverins used to defend against an enemy ship which was sailing at a distance from the Spanish vessel. Smaller types of weaponry included cannons such as

the “saker” and “versos” (swivel guns), which were employed in closely fought battles. Swords, pikes, axes and smaller hand guns were used against enemies who tried to board the vessel. When required, they were also employed in sea battles in Europe against the enemies of Spain. It should be noted that the merchant vessels were also armed with cannons and ammunition, but not as heavily as the warship galleons.

The fleets sailed in a highly organized arrangement. At the head of the fleet was the ship known as the “capitana” on which the commander of the fleet, the captain-general traveled aboard. At the tail end of the fleet was the “almiranta,” where the fleet’s admiral sailed and kept a look out for any enemy ships traveling behind the fleet - ready and armed to the hilt to defend the convoy. The merchant ships sailed in between the capitana and the almiranta along with the other escort ships in the fleet. The capitana was the first ship in the convoy to either leave the port of departure or enter a port on arriving at the fleet’s destination. The almiranta carried the fleet’s flag which could be seen atop the ship’s foremast. As it was necessary that all the vessels remain within the convoy, a large and brightly lit ship’s lantern was mounted on the stern of the lead galleon, the capitana, for the other vessels to see and follow. The ships signaled their whereabouts to each other by firing a gun twice a day.

The route followed by the Atlantic convoy made good use of the clockwise North Atlantic trade winds. After sailing for seven to ten days from Cadiz their first port of call was the Canary Islands, where they anchored taking on fresh water, firewood and provisions and made repairs to the vessels. They then sailed southwest across the Atlantic and the Tropic of Cancer to the Lesser Antilles. This part of the voyage took about one month to complete. When they arrived at the passage of water lying between the islands of Grenada to the north and Trinidad to the south, the convoy separated into two fleets. The New Spain fleet continued north to Puerto Rico and Santo Domingo where they anchored and resupplied the ships with fresh water and provisions. Some of the merchant vessels in the fleet remained in both locations attending to their commercial activities there. The rest of the fleet then sailed to Veracruz after a journey of another month. The Tierra Firme Fleet sailed to Cartagena and Panama and then to Havana to return with the Atlantic convoy to Spain.

The New Spain Fleet and Mexico

Port of Veracruz and the Road to Mexico City (El Camino Real)

As the New Spain fleet arrived at the port of Veracruz, the vessels did not sail directly to the city’s seawall. Instead, they anchored at a small island known as San Juan de Ulua, which was located just opposite to the city and about a half mile away. To prevent the vessels

from drifting away, they were moored by strong cables to the heavy stone walls of the island's small fortress, Castillo de San Juan de Ulua. The cables were attached to large bronze rings set within the outer walls of the fort. If there were many ships in the port at the same time, each vessel was tied to the other. From Veracruz, small boats came out to the galleons to unload the cargo and transfer it to warehouses in the city.

Although the fort was much smaller than the fortresses found in other Spanish possessions, it still had the usual features of Spanish fortifications. These included the heavily fortified stone walls and watch towers. It was a self contained community with its own chapel, hospital, shipyard and dry-dock, as well as its own prison and dungeons. At times, in the history of the island, the fort was used to house political prisoners.

By the seventeenth century, the city of Veracruz had been in long use as Mexico's principal seaport. It was founded by the conquistador Hernan Cortes in 1519, and it became over the years a typical Spanish colonial city with its characteristically fortified city walls, gates, parapets, bastions, cannons and central plaza where most of its important buildings were located including the main cathedral. The city's cobbled stone streets radiated outwards from the central plaza in a time honored pattern, which had been created by urban planners throughout all of Spain, as well as in the Philippines.

As Mexico's main seaport, Veracruz had grown over the years into a city of importance to the colonial government mainly due to the fact that it was where the ships from Spain arrived and departed. The galleons unloaded European merchandise the Spaniards in the Americas clamored for, as well as the foods they were accustomed to eating such as olives, olive oil, almonds, chick peas and wines. The returning galleons sailed from Veracruz with the riches and silver of the New World colonies, as well as the products from the Orient which arrived on the Manila galleons.

In the city, a trade fair was held where merchants from many of the New World colonies came to buy goods for their customers. The crews of the arriving merchant ships were in charge of setting up the fair using the sails from their vessels to shade the marketplace. A multitude of bejeweled women and men, from every stratum in society, arrived to purchase the goods brought to Veracruz on the galleons.

Additional cargo was sent to Mexico City by mule train. The cargo was packed onto the backs of the mules, which was then the main form of transporting merchandise throughout New Spain. Also traveling on the road to Mexico City were the passengers, government officials, military personnel, members of the clergy and merchants

who were all making their way to the capital from Veracruz. Some traveled on mules, while others rode horses or were accommodated in more comfortable horse drawn coaches. The road from Veracruz to Mexico City was known as the “El Camino Real” (The Royal Road). From Mexico City, another mule train carried merchandise from the capital to Acapulco for the Manila galleon and the Philippines.

An English Dominican friar, Thomas Gage (1603-1656), arrived in Veracruz aboard one of the vessels in the New Spain fleet of 1625. He wrote an interesting book about his experiences in Mexico and in Guatemala during the seventeenth century and described the mule train going from Veracruz to Mexico City saying, “A mule was prepared to carry my bedding. Other mules were loaded with a variety of leather chests, and an Indian servant delegated to each mule. There was a rear guard and three more Indians to ride before me these acting as guides.”[4]

He also wrote of the passengers aboard the ship and, of one in particular, a viceroy and his entourage. They were all greeted upon landing in Veracruz by members of various religious orders. Gage said, “As soon as we came to shore we found very solemn preparations for entertainment, all the town being resorted to the seaside - all with their crosses before them, to guide the new viceroy, in procession, to the cathedral.”[5]

Friar Gage did not remain with the viceroy’s entourage, but instead made his way to a Dominican monastery where he was welcomed by its prior. Amusingly, Gage wrote of the eccentric and vain prior saying, “The prior was no staid, ancient, grey haired man, such as usually are made superiors to govern young and wanton friars, but a gallant and amorous young spark, who (as we were there informed) had obtained from his superior, the provincial, the government of that convent with a bribe of a thousand ducats. After dinner, he had some of us to his chamber (they had expected a stately chamber), which might tell us of learning and love of study, but we found not above a dozen old books, standing in a corner covered with dust and cobwebs …(the chamber was) richly dressed and carpeted, and hung with many pictures. Silk covered the tables and the cupboards were crammed with rare porcelains. The young prior’s conversation was nothing but vain boasting of himself, of his birth and his parts, and his favor with the provincial.”[6]

Only a few passengers chose to stay in Veracruz as the city was known as one of the most disease ridden places in Mexico. The climate was hot and humid and it was often plagued by diseases and epidemics. Many who survived the sea journey lost their lives in Veracruz after contracting a tropical disease. For this reason it was also known as “La Ciudad de los Muertos” (the city of the dead). A

hospital was founded by the Mexican Viceroy Martin Enriquez to assist the many individuals who were continuously sick or dying there.

A menacing sight was the fact that Veracruz, in the centuries of Spanish colonial rule, had hundreds of vultures flying around the city. They sat atop buildings and appeared to be waiting for the dead to arrive. To the Aztecs, the vulture was a holy symbol and known as "Copilots." However, to the individuals who arrived yearly on the galleons, the presence of the vultures was an ill-fated omen.

In addition to the unhealthy state of the port city, it was also plagued by severe storms, which caused much damage and destruction. The captains of the arriving galleons often wanted to sail away as quickly as possible to avoid the storms and epidemics. It was sometimes difficult controlling men on the ships who were desperate to go on shore after many months at sea. Some men deserted their ships and vanished into Veracruz's warren of streets. By the beginning of the seventeenth century, the city had grown quickly and there were as many as two hundred Spanish homeowners with this figure increasing to four hundred by the mid-1700s.

Many of the individuals, who arrived on the galleons, dreaded having to stay in Veracruz for any length of time. They realized that they were exposed to the city's oppressive climate, as well as deadly tropical diseases. During a five month period from May to October, the city was plagued by yellow fever, which was known locally as the "black vomit" or "vomito." Every year many of the city's inhabitants died of yellow fever and during one period in June 1820, one hundred individuals died per week. Arriving passengers and officials knew that if they remained in Veracruz, they were in danger of becoming seriously ill and dying. Leaving Veracruz quickly upon arrival became an absolute necessity.

"Quite obviously Veracruz was a place to be avoided and the rich merchants who could afford it had country houses some 50 miles inland at Jalapa, up in the mountains away from the suffocating heat, the winds and mosquitoes. The new arrivals by sea were quite understandably terrified when they heard of the high mortality rate. They landed sniffing pomanders and clutching kerchiefs impregnated with aloes - all ineffectual. Panic seized them when those who got straight into their litters from the ship were struck down before reaching Mexico City."[7]

The distance from Veracruz, which was located at sea level, to Mexico City's higher elevation of 7, 349 feet, was approximately 200 miles. Along the road, as one traveled upon it by mule or in a coach, it was difficult not to notice the extremes in climate from Veracruz's hot and sultry humidity to the temperate, forested and almost spring like

weather of Mexico City. The entire journey from the port city to the capital took about one week or longer to complete. The time frame for the journey depended upon the mode of transportation one used and the many stops one made along the way. More importantly, how quickly one arrived in Mexico City often depended on one's ability to endure the many hardships encountered on the road to the capital.

The journey was a difficult one, but by the seventeenth century it had already been one which many had taken and knew the difficulties of traveling to the capital. After leaving Veracruz, the travelers came to Jalapa and then to the garrison town of Perote. Along the Camino Real they found small inns known as "posadas" and "ventas" or monasteries, where they could spend the night and have a meal of three or four dishes such as roasted beef, turkey or mutton. To the relief of the weary travelers, as the mule train and coaches neared Mexico City, the air was noticeably cleaner and fresher. They were, no doubt, also relieved knowing that they had escaped from the dangers lurking in the port city and its unhealthy environment.

For many who arrived in Veracruz, the city had become their portal to a land of riches. Many hoped to remain and live out their lives in the New World colonies and acquire their own Eldorado. Tales of the wealth of the colonies were related throughout the Spanish peninsula and in Europe. There was no denying or a way to hide the untold wealth that was flooding into the country from the New World colonies. However, immigrating to the colonies had become a difficult exercise for many. The House of Trade guardedly decided which Spaniards were allowed to settle in the colonies or become involved in the trans-Atlantic trade. Nevertheless, many found ways around the system and managed to sail to the Americas as crew members on the galleons. When they arrived in Veracruz, they deserted the vessels they had worked on as crew members. They envisioned beginning new lives in Mexico where they were convinced that they could become exceedingly wealthy. Unfortunately, in most cases, their expectations were not realized. In Spain, however, the fact that so many men signed up to work on the galleons led to a reduction in the city's male population.

"Already by 1525, four years after the Conquest, Andrea Navagiero, the Venetian Ambassador to the Court of Spain, was commenting on the fevered exodus, 'Seville stripped of its male inhabitants has become a city left almost to the women.' It was to guard against this loss of population that an embargo was put on emigration. No one was allowed to leave Spain for the Americas without the king's license, and the penalty for carrying unlicensed passengers was death."[8]

Mexico City and the Parian Marketplace

The merchandise transported to Mexico City from Veracruz on the

mule train, was transferred to the capital's main marketplace. In 1703, the Guild of Philippine Traders in Mexico City, petitioned the viceroy into allowing them to have their own marketplace. The area they had in mind was already in operation and located in the southeast section of the city's main plaza (Plaza de Armas).

It is interesting that a Guild of Philippine Traders had initiated this request as there already existed in Manila a similar Parian, which was the primary center of commerce in the capital. As the center of trade in Manila, it was where the Chinese community lived and operated their many businesses. They offered a variety of goods and skills such as carpentry, bookbinding, architecture and construction. It made sense having a similar marketplace in Mexico City, as it became the primary outlet for the Oriental goods brought to the country on the Manila galleons.

The members of the Guild of Philippine Traders received permission from the viceroy to rename the marketplace, which officially became known as the "Parian." Juan de Viera described the Parian saying that, "it has the form of a citadel or castle, with eight gates and four streets with its square in the middle, which they call the Baratillo Grande (large quantities of products sold at bargain prices). Everywhere, both inside and outside, there are shops selling all kinds of merchandise, from China, from Europe and from within these shores. There is an infinite variety of porcelain, precious stones, silverware, braiding, etc., representing a value of more than thirty million all told. In the middle of the cut price bazaar there are streets full of booths and stalls, and this center is devoted to ready-made garments. The oddest of curiosities are sold at retail – engravings, clocks and watches, drinking vessels and other items of silver – swords, rapiers, firearms, horse brasses, books, cut glass, display cases and the images of saints to put in them. And the other street is composed of kitchen articles and furniture and anything you can think of that might be necessary for the decoration of a house, of whatever class. Drawing cabinets, commodes, china cabinets, the ornamental mirrors with candelabra attached known as cornucopias, sideboards, tables, chairs and stools, cabinets for displaying figures of saints, sculptured images, beds, folding screens, daises, bookcases, chest and coffers, trunks, mirrors and in short, in less than an hour you could put a house together fit to receive any dignitary, for as long as you have money in your pocket there are no end of carpets, sets of china and precious utensils."[9]

Products were sold at the Parian, which eventually made their way to Acapulco and onto the Manila galleon for sale in the Philippines. These included Spanish imports such as wines, olives, olive oil, fabrics, furnishings, artworks, books, ornaments and other items

which were in demand by the Spaniards living in the Philippines. From Mexico City, Oriental products were sold and transported to all parts of the viceroyalty of New Spain.

Not only was Mexico City, Spain's commercial hub in the Americas, it was the nerve center of its network in its overseas colonies. By the early part of the seventeenth century, Mexico City was already a thriving, booming city. It was provided with the characteristic urban planning found in many Spanish cities across the New World settlements, but on a much larger, grander scale. Around the city's main plaza, which is today known as the Plaza de la Constitucion, was the viceroy's palace, governmental buildings and the main cathedral, Catedral de la Asuncion de Maria. The construction of the cathedral was started in 1573 and was completed in stages by 1813.

According to Friar Gage, when he arrived in Mexico City, he thought that the city was exceedingly rich and affluent. He said that, "Cometh every year from Spain a fleet of near twenty ships laden with the best commodities not only of Spain but of most of the parts of Christendom …from those parts which are inhabited by Portuguese and from the countries of Japan and China. In my time, the population was thought to be between thirty and forty thousand Spaniards, who are so proud and rich that half the city was judged to be keeping coaches. The coaches do exceed in cost the best of the court of Madrid. They were encrusted with silver and upholstered with gold cloth and flowered Chinese silks. Even the horses were shod in silver. Both the men and the women are excessive in their apparel, using more silks than stuffs and cloth. A hat band and rose made of diamonds in a gentleman's hat is common, and a hat band of pearls is ordinary in a tradesman. There are not above fifty churches and chapels, cloisters and nunneries and parish churches in the city; but those that are there are the fairest that ever my eyes beheld, the roofs and beams being in many of them all daubed with gold, and many altars with sundry marble pillars, and others with Hazelwood stays standing one above another with tabernacles for several saints richly wrought in gold. "[10]

The city was filled with great wealth and the population prospered. There were many churches, monasteries and ecclesiastical orders operating in Mexico City by the seventeenth century. Many of these religious orders had splendidly ornamented sanctuaries. In one case, Gage mentioned that he saw a chandelier in a Dominican church which was decorated with one hundred branches of solid silver. Other religious orders in the city had also lavished great amounts of money on their churches. He was impressed by the city's streets mentioning that on one street, Calle del Aquila, many gentlemen, nobility and judges resided. The area of St. Austin was the silk center where the

fabrics were sold. Another street was the La Plateria or goldsmith's street, where gold and gems could be purchased. Interestingly, the jewelers in this area had a number of Chinese silversmiths working for them. The Chinese artisans that stayed in the country no doubt arrived in Mexico aboard the galleons.

Viceroyalty of New Spain and Peru

Administratively, the port city of Veracruz came under the jurisdiction of the viceroyalty of New Spain, which was created by the Spanish government in 1535 and was headquartered in Mexico City. From there, a viceroy controlled the entire New Spain viceroyalty which included Mexico, Central America, Havana, Hispaniola (Santo Domingo) and Puerto Rico. Eventually, other areas came under his control as territories in the southwestern part of America were settled by Spaniards. These would have included Spanish territories today known as California, Arizona, New Mexico, Texas and Florida.

The king selected the individual who was to serve as viceroy for the region. In many instances, the individual chosen for the position did not have an administrative background, but he was, nevertheless, expected to cooperate with the professional members of the bureaucracy. These individuals would have been employed by the government for many years and were familiar with the inner workings of its institutions. The viceroy was expected to work with the various Royal Audiencias (Supreme Courts and legislative bodies), which were established in the territories under his jurisdiction. He was also involved with the church and the members of the clergy, who reported to him.

As viceroy, he kept in close touch with the Council of the Indies in Seville regarding the region and its administration. Even though he was in a position of immense power, there were checks on his activities in Mexico City. A "residencia" or investigation could be initiated to look into his activities in the viceroyalty when he returned to Spain. This investigation could be initiated by the king, but was hardly ever employed. More often than not, it was the Royal Audiencia in Mexico City, which was in the position to monitor his governance of the region. The Royal Audiencia was a powerful judicial body which also controlled the ecclesiastical orders in the territories under its jurisdiction. Its position of authority was due to the fact that it could communicate directly with the king and the Council of the Indies regarding all matters pertaining to the territories where it was in operation. Serving in the Royal Audiencia were "oidores" or judges. The first Royal Audiencia was established in Valladolid in 1371, so it was a very old institution which was also used to administer the overseas possessions of the Spanish realm.

The men chosen for the prestigious position of viceroy were usually

aristocrats and members of Spain's nobility. The first Spanish viceroy of New Spain was Antonio de Mendoza, Marquis of Mondejar, and Conde de Tendilla. He was selected for the post by Charles I, after careful consideration and concern that the individual chosen for the position was, in his estimation, the most highly qualified for the appointment. Antonio de Mendoza, served as viceroy from April 17, 1535 to November 25, 1550. He was a member of a highly esteemed and noble family in Spain, and he had already proven his loyalty to the king. He served as a diplomat and successfully conducted missions for his monarch. As the viceroy, Mendoza automatically became the president of the Royal Audiencia in Mexico City.

In order to understand how this institution operated, it should be noted that individual Royal Audiencias were also established in each of the territories reporting to the viceroy. They operated as a system of Supreme Courts, but also had legislative functions and could pass laws. They were all headed by a president, who was also the governor of the particular territory where they were located. For example, in the Philippines, the Royal Audiencia in Manila, which was established in 1583, was headed by the Spanish governor who served as its president.

Mendoza was also officially known as the governor and captain general of Mexico, This meant that he was in a position of great power and authority and acted on behalf of the king. After Mendoza was selected as viceroy, he proved himself worthy of the position and met with the king's approval and respect. After governing the viceroyalty of New Spain for fifteen years, Mendoza was eventually appointed as the viceroy in charge of the viceroyalty of Peru. He served in Lima as the country's third viceroy from September 23, 1551 to July 21, 1552.

Viceroy Mendoza was replaced by Luis de Velasco (1550-1564). Both men were highly educated individuals who remained attuned to their great responsibilities in the New World colonies. Interestingly, Velasco married Mendoza's niece. While Velasco lived like a king in Mexico City and was an expert horseman and bull fighter, he later became impoverished and eventually died after serving as viceroy for fourteen years.

The viceroyalty of Peru was established in 1542, and the viceroy was headquartered in the capital of Lima. The Peruvian viceroyalty initially covered all of the South American possessions, but later, it only had jurisdiction in Peru and Chile. Another viceroyalty was established in 1776 in Buenos Aires, Argentina. In this case, the viceroy governed both Argentina and Uruguay. Moreover, an additional viceroyalty covered the areas of New Granada which governed Ecuador and Columbia.

In the case of the Philippines, it was administered by a governor

who reported to the viceroy in Mexico City. The governor of the Philippines was usually selected periodically as required by the viceroy in Mexico or by the king of Spain. Often the chosen governor was an aristocrat or an individual who was a skilled military professional as was the case in 1738 when Fernando Valdes Tamon governed the Philippines. He was a distinguished military officer and was highly esteemed in Spain, as well as in Mexico.

Within the viceroyalties, there were a number of individuals categorized as "captain generals." These individuals reported directly to the viceroy and were assigned a particular territory to govern. This was the case in the Philippines as it was governed by Governor and Captain General Fernando Valdes Tamon, but it was also the case in Guatemala. There, the captain general also governed the territories in Central America reporting again to the viceroy in Mexico City. The captain general of Chile reported to the viceroy in Lima. The captain general of Venezuela and the captain general of Cuba, Hispaniola (Santo Domingo) and Puerto Rico reported to the viceroy in Mexico City. Through the establishment of the viceroyalties of New Spain and Peru, the Spanish government attempted to manage its colonies more efficiently.

The Tierra Firme Fleet
Cartagena de las Indias, Colombia, Nombre de Dios, Porto Bello, Panama and Peru

After reaching the Lesser Antilles, the Tierra Firme fleet continued sailing for another two weeks before arriving at the port of Cartagena de las Indias in Colombia. As the Caribbean was continuously patrolled by Dutch and English vessels which preyed upon the Spanish ships, the fleet was accompanied by six to eight warships of the Armada de la Guardia. Incidentally, the region of northern South America was known to the British as the "Spanish Main."

The city of Cartagena de las Indias was founded on June 1, 1533 by the Spanish Commander Pedro de Heredia. The administration of the city was controlled by the viceroyalty of New Granada, which was established in 1717. Again, as in other Spanish territories, Cartagena was designed as a fortified walled city with the usual parapets, gates and a central plaza. By 1574, the population of the city consisted of two hundred and fifty Spanish homes.

Cartagena was chosen as a primary location to service the arriving galleons from Spain, as it was situated on an enormous and well-protected bay. As an indication of the importance of the port city, it was protected by seven forts all located on either side of the bay with one at its entrance. These were manned by garrisons of soldiers who were able to fire bronze cannons against any interlopers entering the bay. The fortifications included the Castillo San Felipe de Barajas,

which was constructed in the seventeenth century. Built atop a hill, the fortress was considered an engineering feat at the time. Its masonry walls were 60 feet high, and it was purposely inclined as a defensive measure making it difficult for anyone to climb up. The parapet of the wall of this fortification was also wide enough to accommodate one hundred men. Within the structure there was a series of vaulted tunnels which led to the inner part of the city.

The Cartagena fortresses were constructed as part of a wider defensive perimeter established by Spain in the Caribbean. They shielded the territories against sea and land attacks by pirates, privateers and the enemies of Spain in the Caribbean and in their South American possessions. While the Cartagena fortresses defended the Tierra Firma possessions, the Spaniards were particularly concerned with the protection of Porto Bello and Nombre de Dios located on the Caribbean side of Panama. This was a very important area to the Spaniards as the warship galleons picked up the cargoes of silver, gold and precious gems at the ports of Nombre de Dios and Porto Bello in Panama. Other major fortresses were constructed in the region such as those erected in Havana, Florida and Yucatan, to assist in protecting Veracruz, which only had a smaller fort, San Juan de Ulua.

As Cartagena prospered, it became a target for enemy vessels which were manned by crews that were determined to loot the port city for its wealth. In 1563, the city was plundered by a French nobleman Jean-Francois Roberval. After this attack the city began fortifying its defenses during which a wall was erected around the entire city. But despite the attempts to strengthen the city's defenses, it was repeatedly attacked. The Englishman, John Hawkins, attacked Cartagena in 1568, but failed to capture the city. In 1585, another attack by an Englishman, Francis Drake, proved successful and he captured Cartagena. The city was ransomed and the Spaniards paid 107,000 silver reales to Drake as payment for its return to Spanish control. However, by then much of the city had been destroyed by the English invaders.

Another major attack against Cartagena was launched in March 1741 by Admiral Edward Vernon, the commander of the British naval fleet operating in the Caribbean. The military campaign was carried out using a massive fleet of 186 ships and 27,000 men from England, North America and Jamaica. Of this figure, 15,000 were sailors. Commanding the army of Jamaican and North American soldiers was Major General Thomas Wentworth.

The conflict between the Spaniards and the British forces was known as the Battle of Cartagena de las Indias and lasted for seven weeks. Defending the city of 10,000 inhabitants was the Spanish naval

commander Admiral Blas de Lezo y Olavarrieta, a native from the Basque region of Spain, who was lame and only had the use of one arm. Even though the odds were against the Spaniards, they were able to defend the city against the enemy forces using six ships and six thousand men. The British troops were decimated by a combination of many casualties during the battle and compounded by the fact that the soldiers and sailors were struck down by lethal tropical diseases such as yellow fever. After losing the battle, the British fleet retreated to Jamaica.

As Cartagena had become so crucially important to the Spaniards, it was probably one of the most defensively protected cities in all of the Spanish possessions in the Americas. This was mainly due to the fact that once the galleons arrived in the port the officers and crews of the ships rested there before going to Panama. While they remained in the port, they took on fresh provisions and the ships were repaired or careened. The merchant vessels, on the other hand, stayed in Cartagena where they were involved in conducting business. In the meantime, the commanders of the warship galleons awaited news from Panama that the treasure of silver, gold and precious gems such as emeralds and pearls had arrived in Panama City from Lima, Peru.

When the fleet was informed that the Peruvian cargo was already in Panama City, they embarked from Colombia and sailed to either Nombre de Dios or Porto Bello. Meanwhile in Panama City, upon learning that the galleons had already anchored at one of the Panamanian ports, officials began arranging to transfer the precious cargo to the awaiting galleons. The treasure was transported across the Isthmus in a mule train of about two hundred mules and by river boats. The road used by the mule train was known as the “King’s Highway.”

As it was already the beginning of the rainy season, the two ports of Nombre de Dios and Porto Bello were both known as exceedingly unhealthy and breeding grounds for disease carrying mosquitoes. The commanders were eager to leave Panama as quickly as possible and return to Cartagena, where the accommodations and climate was somewhat more comfortable than the heat of Panama. Commenting on how one had to dress in Panama due to the overwhelming heat, Friar Thomas Gage wrote, “The heat is so extraordinary that a linen cut doublet, with some slight stuff, or taffeta breeches is the common clothing of the inhabitants.”[11]

On the west coast of the Isthmus, Panama City was considerably more comfortable although it was initially located in a vulnerable spot. The city was founded in 1519 and it received the treasure shipped to its shores from Peru on a yearly basis. Surprisingly, it was not a fortified city. In its earliest years of existence it was not provided

with a defensive system as the Spaniards, in the sixteenth century, felt no need to fortify the site as there were few attacks launched against their ships along the Pacific coast. The situation changed in 1671, when the pirate, Henry Morgan, marched across the Isthmus with 2,000 men from the east coast of Panama to the Pacific side of the country. Morgan attacked Panama City, but he was unable to find the silver treasure which had been shipped to the city from Peru that year. Knowing of Morgan's impending attack, the officials of the city had wisely transferred the silver onto ships for safekeeping which were then sent out to sea. The vessels waited until they received news that Morgan had departed from the city and then returned with the treasure intact. After Morgan's attack, the city was moved to a more secure location on a hill situated five miles away. Fortifications were then built to protect the new city and apparently they were successfully able to repel further attacks by pirates and privateers.

Although the fleet originally sailed to the port of Nombre de Dios, which was founded by the Spaniard, Diego de Nicuesa in 1510, by 1584 government officials were already considering moving their activities to another location along the Panamanian coast. Their main concern was the fact that the climate was problematic in Nombre de Dios, and it was considered an unhealthy spot. Many individuals, on the arriving vessels and those living in the town, died as a result of the tropical diseases and epidemics that periodically struck the area.

Another problem with the port was the fact that even though it catered to the needs of the treasure carrying warships, it was defensively vulnerable. The town was a small one with only about one hundred and fifty roughly built houses by 1570. It was defended by only six cannons which meant that the town was basically defenseless. Considering the valuable treasure which was loaded onto the galleons at the port, it was amazing that it was not as protected as Cartagena. But then, the galleons were warships and they were well equipped with cannons, sailors and soldiers and able to provide for their own defense. It was not unusual for each warship galleon to carry as many as seventy guns and hundreds of soldiers.

After Nombre de Dios was attacked by Francis Drake and set afire in July 1572, government officials decided to move the activities of the warship galleons to the port of Porto Bello. The new port proved somewhat more beneficial as it provided a more secure area to receive the galleons, but in some respects it was still as problematic as Nombre de Dios. The climate was the same and the men were still vulnerable to tropical diseases in Porto Bello. Many members of an arriving galleon could perish there just as easily as they did in Nombre de Dios.

The town of Porto Bello was originally founded in 1597 by the

Spanish explorer, Francisco Velarde y Mercado. In comparison to other towns and cities in the region, it was relatively young. Both Nombre de Dios and Porto Bello only came alive when the warship galleons were in port. As soon as the ships sailed away, the towns returned to just being sleepy enclaves with only a few inhabitants and government officials who were unable to escape to cooler climes.

However, when the warship galleons and merchant vessels arrived in either port, an open air trade fair was held to buy and sell the goods they brought with them. While the trade fair was conducted, the port towns became centers of great activity and gaiety. Merchants arrived from Lima, Quito, Bogota and Guatemala and even from the Philippines to buy goods for their customers back home. These products included Peruvian bark (also known as Jesuit's bark and used to cure malaria), spices such as cinnamon, ipecac (used as emetic inducing vomiting), sarsaparilla (used medicinally), cocoa, wool and vanilla.

When the mule train arrived at the port, the cargo was quickly loaded onto the galleons. For Thomas Gage who was in Porto Bello at that time, he was amazed to see so many mules in one place and the amount of cargo they had carried on their backs from Panama City to the east coast. He wrote that, "In one day, 200 mules laden with nothing else (but silver arrived in Porto Bello)… (The silver) lay like heaps of stones in the streets…only gold and gems were dignified by storage under lock." When all preparations had been completed, the galleons returned to Cartagena where they remained for the winter before sailing to Havana the following year for the return journey to Spain. [12]

The Question of Building a Panama Canal in the Sixteenth Century

An interesting question concerns whether or not the Spaniards had ever considered building a canal across Panama for the easier transfer of goods from the Pacific coast to the Caribbean ports. Apparently, the Spanish government in Spain and Charles V (1519-1556), were both interested in this idea.

During the sixteenth century the king dispatched military engineers to Panama to study the territory and to determine if a canal could be constructed across the Isthmus. The historian Antonio Herrera wrote that while reports in favor of a canal were sent to the king, there were government officials who were opposed to the idea of building a canal. They were afraid that one ocean was higher than the other and that the construction of a canal would lead to flooding of the entire area of Panama. The idea had no basis in fact. Nevertheless, the king was not persuaded that such a disaster would occur and ordered the Governor of Panama, Pascual de Andagoya (1495-1548), to study in

greater detail the possibility of constructing a canal across the Isthmus. The new study provided by the governor was in favor of constructing a canal, but he stressed that the enterprise would be expensive and that Spain did not have the resources to devote to such a massive project. Ultimately, when the church opposed the project, the king shelved the idea. Apparently, the church was of the opinion that splitting the land into two parts was in some way against the precepts of the church. The canal, of course, was later constructed by the United States during the years of 1904 to 1914.

Lima, Peru (La Cuidad de los Reyes / The City of the Kings)

As the source of untold wealth, Peru became Spain's chief contributor to its royal treasury. Every year, an inestimable fortune was shipped to the peninsula. After Mexico City, only the Peruvian city of Lima was to equal her in importance to the Spanish Crown. Massive quantities of silver were discovered in Potosi, Peru Alto, which is presently Bolivia, but in the sixteenth century, it was part of the viceroyalty of Peru.

After the Incan empire had been conquered, the city of Lima was established on January 18, 1535 by the Spanish conquistador, Francisco Pizarro y Gonzalez (1471-1541), the first Marques de los Atabillos and a native of Trujillo (Extremadura), Spain. He first arrived in the Americas as a member of the Vasco Nunez de Balboa expedition of 1513 to Panama. From 1519 to 1523, he served as the mayor of Panama City. One description of Pizarro is interesting but not very flattering. "Not much is known about Pizarro, for unfortunately, unlike Cortes, he left no records. He could not write. There is a portrait of him in the Museo de America in Madrid. He appeared to be of dark complexion with a well shaped head, large eyes and a prominent, slightly beaked nose. He was temperate in his habits, ate and drank sparingly, rose an hour before dawn and was fond of gambling and punctual in attendance to business and modest as a person. He wore a black cloak with a white hat and shoes of the same color. He was the son of an infantry colonel and a peasant woman of no education of humble origins. He never married. He did however have two children a son and a daughter by an Indian princess of Incan blood, a daughter of Atahualpa, and granddaughter of the great Huayna Capac. Both children survived him."[13]

The Spaniards' name for Lima was "La Cuidad de los Reyes" (the city of the kings). The city was designated as the seat of power for the viceroyalty of Peru, which initially administered the South American territories of the land today known as Bolivia, Northern Chile, Ecuador and Colombia. The viceroyalty was later divided into three sections: the viceroyalty of Peru (still administering Northern Chile and Bolivia), and the viceroyalty of New Granada (covering Ecuador

and Columbia). Venezuela was administered separately by a captain general reporting to the Royal Audiencia of Santo Domingo. In the eighteenth century, it came under the administration of the viceroyalty of New Granada.

Of the viceroys administering the colonial government of Peru, the fifth viceroy Francisco Toledo y Figueroa, Count of Oropesa (1569-1581) was noteworthy. He was a capable administrator and passed a number of reforms which assisted in developing the economy of the territories under his jurisdiction. This included an increase of the silver sent to Spain to finance the king's various projects there, as well as military campaigns in Europe. He was also instrumental in the establishment of the Holy Inquisition in Peru in 1570. Interestingly, the Holy Inquisition was set up in Mexico City, but only in 1572. From there, it was also in operation in Manila.

By the seventeenth century, Lima had already become Spain's main hub in South America. It was a thriving city with all of the usual governmental institutions in place including its own Royal Audiencia. A vast bureaucratic system was established in the city with governmental agencies, functionaries, military officers and soldiers, members of the various religious orders and merchants. Typically, as in all major Spanish possessions, the city had a main plaza, cathedral, viceroy's palace, shops and homes of the Spaniards, artisans and skilled craftsmen.

The one major difference between Mexico City and Lima was the tremendous amounts of silver, gold, emeralds, pearls and other gems that were exported from Peru to Spain annually. As a result, the city became a cosmopolitan center of trade, where its residents lived luxurious lives. The Spaniards of the city also became major buyers of luxury goods from the Orient. They enjoyed purchasing silks brought to Acapulco and then re-transported to Lima where they were in great demand. The customers in Lima paid large sums of money for silks and other fabrics from Asia. At one point, Spanish officials prohibited the sale of Oriental goods in Peru especially silks from Manila, but a clandestine trade in the fabrics ignored the government's restrictions. Merchants and politicians smuggled silks into Lima even though they realized that they were involved in illegal activities.

In one particular instance, when the former deputy governor of Manila, Dr. Antonio de Morga, was appointed governor of Quito, Ecuador, he sailed from Mexico to Ecuador with his family. Before embarking from Mexico, the ship's register listed that Dr. Morga had a number of crates in the hold which contained his personal library. It was later discovered, that the crates actually contained silks from Manila, which he was smuggling into Ecuador for his son who was planning to open up a silk shop in Lima. Although, the incident was

apparently investigated by government officials in either Mexico or in Lima, Dr. Morga was not prosecuted for his offense. However, the incident serves as a reminder that officials at all levels of the government were involved in the smuggling of goods.

With the discovery and expansion of the mining of silver, the precious metal became the main source of wealth for Spain. The mines in Potosi (Bolivia) were particularly rich and churned out increasingly large amounts of silver. As the city prospered, its population grew. By 1650, there were 160,000 persons in residence in Lima.

The New Spain and Tierra Firme Fleets Re-Unite in Havana (La Habana), Cuba

The New Spain fleet sailed as soon as it could from Veracruz and spent the winter months in Havana, while the Tierra Firme fleet stayed on in Cartagena. Both fleets re-united in Havana in March of the following year. They remained in Havana for one month and waited for the arrival of all the vessels which were expected to join the convoy to Spain.

The island of Cuba was originally explored in 1508 by Sebastian de Ocampo. In 1511, another conquistador, Diego Velazquez de Cuellar, fought against the natives living there and defeated them. He then established Spain's first settlement on the island near Baracoa. Velazquez went on to serve as the first governor of Cuba until his death in 1524. Although the island proved of little value to the Spaniards, who were basically only interested in finding gold, it was its position as a seaport that became its most valuable asset. As such, it was turned into Spain's hub in the Caribbean for the servicing of its returning fleets.

The city of Santiago de Cuba, located on Cuba's western coast and facing the Gulf of Mexico, became its main seat of power. The city was founded by Diego Velasquez de Cuellar on August 25, 1515. However, as the city was attacked by Dutch, English and French vessels, the Spaniards decided to move their operations to Havana in 1519. The decision was a prudent one as Havana was in a position to provide Spanish vessels with greater protection against enemy attacks.

For men like Hernan Cortes, the conquistador who conquered and occupied Mexico, Cuba served as a place in 1519 from which to plan and launch his campaign to seize Mexico from the Aztecs. Many of Cortes' fellow conquistadores in Cuba, eventually joined his expedition and traveled to Mexico with him. Others went independently to South America where they hoped to make their fortunes. In the early years of Spanish occupation, there were only a small number of Spaniards living in Cuba. At the most six hundred Spaniards resided in Santiago de Cuba, but this figure increased to 7,000 by 1544.

The city of Havana was founded in 1515 on a well protected, deep bay. It was officially recognized as a Spanish city through a royal decree granted to Havana by Philip II on December 20, 1592. Moreover, in 1634, it was recognized again as an important maritime hub. As such, Havana received a further distinction and was designated the "Key to the New World and Rampart of the West Indies." It was indeed important as a seaport as it also was equipped with an excellent shipyard where vessels were constructed, repaired and careened.

The area where Havana was located during the Spanish colonial period was known as the "Puerto de Carenas" (careening bay). It was the bay's naturally secure position which appealed most to the Spaniards. The bay itself was large and able to cater to the needs of ships of heavy tonnage. Not only was it spacious, but the water was deep and able to accommodate many sea vessels. Moreover, the entrance into the bay was narrow and could be protected at night by a heavy chain which was strung across the bay's entrance from one fort to the other. This provided a further level of protection for the ships which were anchored at the bay.

In addition to attending to the maintenance of the ships, the city also provided fresh water, firewood and large quantities of provisions which were required by the Atlantic fleet for the return voyage to Spain. While these services were provided to the vessels, the crews and passengers were able to relax and refresh themselves in Havana which was able to provide them with every necessary comfort during the interval. It was the ideal situation for the mariners who arrived there throughout the year. Unlike Veracruz or Porto Bello, Havana was actively in use year-round and the city was a thriving port filled with inns, eating and drinking houses, where the crews of the ships could find rest.

Commercially, the yearly arrival of the galleons proved highly profitable for Havana where goods were sold such as spices, emeralds, gold, dyes, as well as food products such as corn and cocoa. As the ships required a great deal of provisioning, equipment and supplies, this improved the local economy. Fruits, vegetables, beef, sugar, sweet potatoes, yams, corn, beans, yucca and leather were all sold to those working on the ships who were provisioning them for the journey to Spain.

Due to its importance to the Spaniards, Havana was the second most fortified city in the Caribbean after Cartagena. As enemy vessels were continuously attempting to attack Havana, aware of the presence of treasure ships in the port, the city had to fortify itself for its own protection and to defend the ships in the harbor. The entrance into Havana's bay was guarded by two fortresses, the San Salvador de la

Punta on the western portion of the bay's entrance and opposite to it, the Castillo de los Tres Reyes Magos del Morro on its eastern approach. The curtained walls of the fortresses were the most heavily fortified as they faced the land. The city was also surrounded by a wall, which was constructed from 1674 to 1740 and defended by many cannons and soldiers. In addition to the outer wall of the city there was an inner wall with parapets and bastions serving to further defend Havana. At the center of the city stood another fortress the Castillo de la Real Fuerza, which also served as the governor's residence. Two additional defensive structures were added in the seventeenth century, the Castle of La Chorrera Tower and the Castle of San Lazaro.

Even though the first fortifications were built in 1553, the city was attacked in 1555 and set afire by the French pirate, Jacques de Sores. He was, however, disappointed in the amount of booty he carried away from the city, as it was not the treasure he knew the galleons were carrying when they arrived in Havana. After this attack the Spanish government quickly decided to erect additional fortifications in order to protect the city from further encroachments by enemy vessels.

As a port city, Havana experienced a growth of activity and expansion during the seventeenth century. Many structures were constructed during this time period mostly of wood but incorporating Spanish architectural designs and in particular those of the Canary Islands. A number of religious buildings were erected such as the convent of St. Augustine and the Chapel of the Humilladero, as well as the Hospital of San Lazaro. The hospital was kept quite busy in 1649, when an epidemic broke out and killed one third of the city's inhabitants. It was thought at the time that the disease arrived in the city from Cartagena on the fleet ships. But there was no way to confirm this supposition. By the eighteenth century, Havana was Spain's third largest city in the Americas after Mexico City and Lima and had a population of more than 170,000 persons.

In 1762, Havana was captured by the British during the Seven Year's War (1756-1763). When Spain became aligned to France during the war, it also became a war target. The British Admiralty in London decided in December 1761 to launch a number of attacks against Spanish possessions including Havana, as well as Manila, Philippines in order to destroy Spain's power in the Americas and in Asia. The attack against Manila was carried out under a joint operation through the British Royal Navy and the East India Company based in London and in Madras, India. The campaigns against the Philippines was led by the ground forces commander Brigadier General William Draper, while the sea portion of the enterprise and in charge of the Royal

Navy vessels was Rear Admiral Samuel Cornish. The campaign against Havana was commanded by Admiral Sir George Pocock and General Sir George Keppel (3rd Earl of Albemarle). The Spanish Governor and Captain General in control of Cuba at the time was Juan de Prado.

The city was attacked by the British ships on July 30, 1762. After a number of battles and great loss of life mostly due to the fact that many soldiers and sailors had contracted yellow fever, Havana surrendered to the British on August 13, 1762. Initially, the city was governed by Sir George Keppel. During the time the British occupied Cuba, they expanded the island's trade. Larger quantities of Cuban goods were exported and imports into the island also increased. Trade was conducted with Britain's possessions in North America and in the Caribbean. In addition to the importation of a number of food items from the British colonies, as well as other goods, slaves were brought to Cuba from West Africa to labor in the country's sugar plantations. The British occupation of Cuba was however short lived as the, "Peace of Paris Treaty," was signed by England, Spain and France ending the war in 1763. In the treaty, Spain regained control of Cuba, but turned over Florida to England.

After the war, the Spanish officials of Cuba transformed Havana into its most fortified city in its American possessions. It was during this time period, that the largest fortification in all of its settlements was constructed, the Fortress of San Carlos de la Cabana. The construction of the fortress took eleven years to complete and was provided by cannons brought from Barcelona. Additional fortifications were added such as the Castle of El Principe, which defended the western portion of the city. Gun batteries, as well as the San Nazario and the Doce Apostoles were added to reinforce the bay's shoreline.

As the port accommodated a large number of vessels, Havana had its own shipyard where they could be repaired and careened. The vessels were attended to by master shipwrights and skilled carpenters from Spain, as well as caulkers and iron mongers. Everything and anything required to ensure a ship's seaworthiness was provided at the shipyard. In particular, there was an abundant supply of timber available for the repair of the vessels, which were often plagued by the detrimental effects of shipworm and wear and tear. Cuba had vast forests of mahogany and cedar which were used in the construction process. The availability of timber was commercialized with Cuba supplying Spain with mahogany for its furniture industries. The shipyard also provided the vessels with new sails, while rigging and hulls were repaired.

At Havana's "El Arsenal" shipyard, one hundred and nine ships were built over time. One of the largest vessels constructed at the shipyard was the four decked warship galleon the *Nuestra Senora de la Santisima*

Trinidad. She was completed in 1769 and measured 62 meters long. Initially, she was armed with 120 cannons, but was later refitted to accommodate 144 cannons. Unfortunately, she met her end at the Battle of Trafalgar in 1805.

The Return Voyage to Spain

After re-provisioning and repairing the ships in Havana, the New Spain and Tierra Firme fleets sailed in the Atlantic convoy to Spain along the Carrera de las Indias. When they embarked from Cuba in late April or May, they followed a northern course to latitude 40 degrees and then turned east towards the Azores. As they sailed, they had to be vigilant and on the lookout for enemy vessels. If the ships sailed with good weather and without any incidence, they could reach the Azores after one month.

When the fleets arrived at the Azores, they normally re-provisioned there and took on fresh foods and water and made any repairs necessary to the ships before continuing to sail to Cadiz. They normally took another twenty to thirty days before they arrived in Spain. However, throughout the voyage they were continuously on the alert as they approached Spain, and especially the Cape of San Vicente, where pirates and privateers were often lurking. As such the cape was often referred to as the "Cape of Surprises," as one never knew what was awaiting them there. In order to prevent any untoward attacks against the fleet, reconnaissance vessels were sent ahead to patrol the area and discover any enemy ships so that they could alert the rest of the fleet.

After the fleet arrived in Spain, the cargo and silver treasure was unloaded and immediately transferred to Seville. Normally, the galleons sailed to the port of Sanlucar on the return journey. It was not unusual to have many on board the ships who were in need of medical care by the time the fleet arrived in Spain. Many of the crew or passengers were often beset by tropical diseases they had contracted while in Cuba or in other ports in the Caribbean. The sick members of the crew were taken to hospitals catering to the needs of mariners such as the "Nuestra Senora de Buen Aire" in the Triana neighborhood of Seville. It is difficult to determine how many individuals over the centuries lost their lives on the galleons due to the contraction of diseases, but clearly many died in the Americas. They were unable to cope with the wide range of epidemics which plagued places like Veracruz, Nombre de Dios and Porto Bello. Others perished due to storms or accidents at sea, and of course, through the confrontations with pirates, privateers and enemies of Spain who were determined to capture a treasure ship.

Ultimately, the galleons, which plied the Atlantic and brought Spanish goods to the Americas and returned to Spain with the treasure

they found in their New World settlements, provided an indication of how the galleons were managed in the Atlantic and the Pacific arenas. The similarities between the Atlantic ships and those that sailed across the Pacific were in large measure due to the vast bureaucratic system that the Spaniards established to control its massive overseas trade operation. As a result, the House of Trade in Seville controlled the galleons via a set of laws which covered every aspect of the galleon trade and the vessels employed in this enterprise. The regulations also covered the construction of the ships, how they were manned and the cargoes they carried. In the Philippines, these same laws and regulations were also adhered to by the Spaniards in the colony. Even though the archipelago was Spain's most faraway possession, the colony and the galleons were managed according to Spanish dictates.

Chapter 3

The Philippines Becomes a Spanish Colony

As early as 1508, King Ferdinand of Spain was interested in having access to his own sources of Asian spices. At the time, the buying and selling of spices in Europe had become so lucrative that every nation on the continent was vying for a share in the business. During a meeting in Burgos with the leading navigators of the period, which included Amerigo Vespucci, the topics under discussion included the schemes the Spaniards could employ in order to make territorial claims on spice producing lands in Asia.

According to the Treaty of Tordesillas signed in 1494, the world inhabited by Spaniards and the Portuguese, was basically divided into two regions for exploitation and conquest. One half was allocated to the Spaniards and the other half to the Portuguese. The lands to the west, which had been discovered by Christopher Columbus, belonged to Spain, while those in the East were allocated to Portugal. However, they each claimed ownership of the Spice Islands the Moluccas, which according to them, was located in a separate area between the East and West. Given this premise, they each claimed the territories in Southeast Asia as their own.

"Both Castile and Portugal accepted the Treaty of Tordesillas, but each rushed out in search of the spice territory within its own demarcation. Spices, a commodity of enormously increasing value, had reached Europe centuries earlier through the maritime and land routes of the Middle East which linked the eastern Mediterranean with the terminals of Venetian trade. The expansion of the Ottoman Empire had seriously affected the age old trade generating a great scarcity of these products in the end market. The sea provided a means to directly access sources of spices in the south of Asia, thus yielding a vastly superior profit despite the enormous costs of the undertaking. "[14]

On April 22, 1529, their quarrel over the territory was put to an end with the signing of the Treaty of Zaragoza by King John III of Portugal and Emperor Charles V of Spain. In the treaty, Spain had jurisdiction over the Philippines and it was recognized as the owner of the Moluccas. In a later development, the Portuguese purchased the Moluccas from the Spaniards for 350,000 gold ducats. The Spaniards agreed to the sale of the Spice Islands as they needed the gold to finance a war they were involved in against the French. The war was known as the War of the League of Cognac (1526-30).

However, when the explorer, Ferdinand Magellan, sailed from Spain

to the Philippines in 1519 and arrived there in 1521, the Moluccas were still under the control of the Portuguese. They had established trade posts in the Spice Islands and were involved in selling the highly sought after spices (cloves, pepper, cinnamon and nutmeg). As a result of Portugal's lucrative trade in spices, the Spaniards became interested in the Philippines (Islas de Poniente or the Western Islands as they were then known by the Spaniards), as they thought that spices were also growing in the archipelago as abundantly as they had been in the Portuguese held Moluccas.

Initially, the Portuguese mariner, Ferdinand Magellan, appealed to King Manuel of Portugal in September 1517 for his support of an expedition he was planning to the Spice Islands. Magellan was convinced that he could find a westward route to the Moluccas, a feat that had eluded Christopher Columbus in 1492. However, his appeal was turned down, and as a Portuguese citizen having been born in the country in 1480, he felt dismayed by the king's refusal to support his expedition. As a result, he decided to immigrate to Spain where he hoped to approach the Spanish king and reiterate his plan to travel to the East. While living in Seville, he became a Spanish citizen and married a local Spanish lady. Eventually, he was granted an audience with Charles V, (Emperor of the Holy Roman Empire who was also known as Charles I in Spain b. 1500 d. 1558). During his meeting with the king, he again repeated his plans to command an expedition to Asia. This time, he was fortunate as the Spanish king was aware of the importance of the expedition and extended his full support to him. The king was also interested in the proposed plan as it meant that the objectives of the expedition could be achieved without encroaching on Portuguese held territories in Southeast Asia.

With the assistance provided by Charles V, Magellan sailed to the Philippines from the port of Sanlucar de Barrameda located on Spain's Atlantic coast on September 20, 1519. His fleet consisted of five vessels: the flagship the *Trinidad* of 110 tons and 55 men and commanded by Magellan; the *San Antonio* 120 tons and 60 men; the *Concepcion* 90 tons and 45 men; the *Victoria* of 85 tons and 43 men, and the *Santiago* of 75 tons and 32 crew members. The mariners on the ships were mostly Spaniards, but there were also twenty Portuguese who were skilled pilots and officers. Other crew members consisted of Italians, Germans, Greeks, Flemish and a slave named Enrique from Malacca who was employed by Magellan and acted as an interpreter. It has been thought that Enrique was actually a native of the Philippines, but how he came to be in Spain in 1519, was a mystery.

The fleet traveled to the Canary Islands and then crossed the Atlantic sailing to Brazil. After almost a year in South America,

Magellan sailed to the Pacific passing through the strait that now bears his name on November 28, 1520. According to Antonio Pigafetta, a young Italian diplomat who joined the fleet in Spain and was an assistant to Magellan, he wrote in his diary that one of the ships in the fleet the *San Antonio* commanded by Juan de Cartagena had deserted the expedition. The passage across the ocean was so calm and placid that Magellan named it the "peaceful sea" or in Latin the "Tepre Pacificum," which was shortened in English to the "Pacific." The fleet arrived at the island of Guam on March 6, 1521 after having traveled across the ocean for almost four months. By March 16, 1521 they reached the Philippine island of Samar. Magellan named the Philippines "Las Islas de San Lazaro."

Although Ferdinand Magellan is often thought of as being the first circumnavigator of the globe, he was unfortunately not able to achieve that distinction. While he was in the Philippines, he became involved in an inter-island native dispute and was killed by warriors on the island of Mactan on April 27, 1521. His successor, Juan Sebastian Elcano, took command of the fleet and became the first Spanish circumnavigator of the world. He returned to Spain on the only remaining vessel in the fleet the *Victoria*. His route back to Spain entailed journeying around Africa's Cape Hope and then north to Seville. When he arrived in Spain, only eighteen crew members of the original crew of 235 men had survived the expedition.

Due to his reputation as a highly skilled mariner and his experiences in the Magellan voyage, Juan Sebastian Elcano served as a chief pilot for the second expedition to the Philippines. It was commanded by Garcia Jofre de Loaysa and consisted of a fleet of seven ships. The vessels sailed from La Coruna, Spain on July 24, 1525. At that time La Coruna, located in northern Spain, was a well known European trade center involved in the buying and selling of spices.

The expedition basically followed Magellan's route to the Philippines. The ships in the fleet consisted of the flagship the *Santa Maria de la Victoria* of 360 tons, which was under the command of Garcia Jofre de Loaysa. One of the other vessels, the *Sancti Spiritus* of 240 tons, was commanded by Juan Sebastian Elcano. The other ships were the *Anunciada* 204 tons, the *San Gabriel* 156 tons, the *Santa Maria del Parral* 95 tons, the *San Lesmes* 96 tons, and the *Santiago* of 60 tons. The *Santa Maria de la Victoria*, the *Sancti Spiritus*, the *Anunciada* and the *San Gabriel* were all constructed in Vizcaya, while the *Santa Maria del Parral*, *San Lesmes* and the *Santiago* were built in La Coruna, Spain.

The objective of Loaysa's expedition was to seek out the Spice Islands and attempt to seize them away from the Portuguese. Only four of the seven ships actually passed through the Strait of Magellan

into the Pacific. Loaysa's flagship the *Santa Maria de la Victoria* arrived at the island of Mindanao on October 4, 1526, but without its commander Loaysa as he died on July 30, 1526. The ship's command passed to Juan Sebastian Elcano, but as he also died during the voyage, the command was turned over to Martin Iniquez Carquizano. When Carquizano arrived in Mindanao, he and his men became involved in a confrontation with the natives and were unable to find provisions. They sailed south from Mindanao to the archipelago of the Celebes, but again they became involved in another conflict and this time against the Portuguese who were located there. One of the ships in the fleet the *Santa Maria del Parral*, which managed to arrive in the Celebes, was destroyed and the crew members were killed by the natives.

During further confrontations against the Portuguese, Andres de Urdaneta and twenty-four crew members of the expedition were captured and held as prisoners. At the time, Urdaneta was only seventeen years old and serving in the expedition as an apprentice. However, several sources state that he was already a highly educated young man, and that prior to joining the expedition, he was employed as an accountant in Spain where he was also socially well connected. Andres de Urdaneta was marooned in the Moluccas for twelve years, but eventually was permitted to sail on a Portuguese vessel to Lisbon and then home to Spain.

A third expedition was sent to the Philippines with the objective of finding a return route from there to Mexico. This time the expedition was commanded by Alvaro de Saavedra who was a cousin of the Spanish conquistador Hernan Cortes. This expedition did not embark from Spain, but instead sailed directly from Puerto de Navidad, on Mexico's west coast on October 31, 1527. The commander's instructions from Hernan Cortes indicated that he was to search for any survivors of the Magellan and Loaysa expeditions and locate the return route to Mexico from the archipelago. Although Saavedra sailed with a fleet of three ships, only the *Florida* arrived in the Philippines in February 1528. From there, he sailed south to the Moluccas where he was able to rescue survivors of the Loaysa expedition. However, he was unsuccessful in locating the return route although he managed to arrive back in Mexico with the individuals he had rescued.

The fourth expedition to the Philippines was commanded by Ruy Lopez de Villalobos. He sailed from Puerto de Navidad with a fleet of six ships on November 1, 1542. In his sailing orders from the Spanish government in Mexico City, he was instructed to keep his distance from the Portuguese owned Moluccas and find a return route from the Philippines to Mexico. Moreover, he was instructed to prepare a number of reports concerning the places the fleet traveled to, as well

as the natives they met and the products available in these territories. They were also to set up a colony in the Philippines and begin converting the natives to Christianity. The fleet arrived in Mindanao after a journey of three months with five of the six ships they had originally started out with. The fleet's flagship the *San Cristobal* disappeared during a severe storm in the Pacific, but was later able to rejoin the others at Sarangani in the Philippines. It was during this expedition that Villalobos named the islands of the archipelago in honor of Prince Philip (Felipe), who later became Philip II. They were called "Las Filipinas," which was later modernized to its present name of the "Philippines."

In 1559, Luis de Velasco, the Spanish viceroy in Mexico City was ordered by Philip II to mount a fifth expedition to the East, this time with the intention of taking over the Philippines. Although the secret orders given to the commander of the expedition stated that it had been organized to explore New Guinea, it was, in fact, planning to conquer the archipelago on behalf of the Spanish Crown. The air of secrecy surrounding the preparations and objectives of this particular expedition, were fueled by the need to keep the Portuguese unaware of their true intentions. As far as the Portuguese were concerned, the Philippines lay within their territorial claims in Asia, as they had purchased the Moluccas from Spain and through that transaction, they considered the Philippine archipelago as part of the deal.

However, by the mid-1500s, the Spaniards were longing for a trade post of their own in Asia and access to spices they could exploit. They regretted selling the Moluccas to the Portuguese and were determined to somehow circumvent their presence in the Moluccas. Under the original Treaty of Zaragoza, the Moluccas belonged to the Spaniards, but despite the fact that they sold the Spice Islands, they were still operating under the impression that they had only mortgaged the territory to the Portuguese rather than actually selling the islands to them. They felt that that they still had legitimate rights of ownership to the Spice Islands and the Philippines.

The king signed an official order on September 24, 1559, in which, he extended his permission to prepare the expedition. In response to the order, the Royal Audiencia (the Spanish governing body in Mexico), officially asked Miguel Lopez de Legazpi on July 31, 1564 to command the expedition to the Philippines. As Viceroy Luis de Velasco passed away in 1564, the Royal Audiencia was governing New Spain until the king selected a new viceroy for the region. There was every indication that as early as 1557, Viceroy Velasco and Fray Andres de Urdaneta were already contemplating another voyage to the Philippines, and that Miguel Lopez de Legazpi, was understood to having accepted the post as the commander of the expedition. During

that same year, Legazpi was involved in organizing the construction and preparation of vessels for the fleet at Puerto de Navidad.

To serve in the capacity of chief pilot for the expedition, the Basque born Fray Andres de Urdaneta (1498-1568), was selected for the post as he was already experienced with Southeast Asia having served in the Loaysa expedition to the Philippines and the Moluccas. By this time, Urdaneta was a 66 year old member of the Augustinian order in Mexico City. He was a well respected member of the church community in the capital and recognized for his expertise as a highly qualified navigator. It would be up to him to fulfill the very important objective of finding a feasible return route from the Philippines to Mexico. This would enable future galleons to travel across the Pacific with fewer difficulties. Establishing a quick and convenient route from Southeast Asia to Mexico was at that time considered of immense importance to the Spanish government. They were clearly aware of the shorter journey from Mexico to the Philippines, which took about three months to complete, but were still befuddled by the return route.

In order to prepare for the voyage, it was necessary to establish a proper naval shipyard on Mexico's west coast in order to construct the ships which were to participate in the expedition. Prior to this time, the Spaniards were not equipped with a facility of this sort in Mexico, so this was a first for them. The entire project turned into a massive undertaking. A site had to be located for the shipyard and experienced shipwrights including carpenters had to be hired to complete the construction of the vessels. A vast supply of materials were required including timber, sails, rigging, iron, pitch, creosote, and provisions had to be allocated for the shipyards and the men working there. Additionally, weaponry including cannons, cannon balls and smaller arms, nautical instruments, provisions for the journey and water all had to be collected for the vessels. When the ships were completed, the royal treasury of New Spain had spent more than seven million silver pesos on the entire project.

A typical list of the provisions, weaponry, cargo and equipment required for an expedition has been provided by Jose Ramon de Miguel in his biographical study of Fray Andres de Urdaneta. However, there was no indication if the list was prepared for the Legazpi-Urdaneta voyage. The list, nonetheless, provides an indication of the type of items carried on the Pacific vessels. [15]

"Memorandum of the ship's stores that I think should be brought on these ships: 250 quintales of biscuits, 500 fanegas of corn, 12 fanegas of beans, 6 fanegas of chick peas, 40 arrobas of oil, 40 arrobas of vinegar, 4 casks of wine in glass containers, 50 slabs of bacon, 500 pieces of cheese, 50 pitchers of honey, 6 fanegas of lentils, 50 arrobas

of dried fish, 6 casks of salt. ”

“A list of items that can be brought from Nueva Espana (Mexico) since there is no money here (in the Philippines) to make purchases: A grana (fine scarlet cloth) from Valencia, two scarlet tapestries, two yellow tapestries, two green tapestries, two blue tapestries, six pieces of velvet, one black, one white and six in assorted colors, 12 pieces of tafetanes entredobles – taffetas in assorted colors, 12 inexpensive Moorish gauze veils, a chest from Ruan, 7 pieces of fine Dutch linen, 200 brass chamber pots, 200 axes, 200 machetes, 20 metal bells for China, 50 dozen knives from Flanders with brass handles, 20 dozen assorted figurines, mirrors of all kinds, 100 dozen cascabels for cannons, 100 small bells, 4 arrobas of glass pearls, two arrobas of glass beads, 500 bundles of green and yellow bugle beads, 4 arrobas of beads of all kinds, 20 brass plates, a few light inexpensive gold items, some lightweight items of silver, a few trifles from Flanders, 4 dozen simple hats de gama, 1,000 ducats in reales, liquid amber in bars, balsam, copal which is saumedio of Nueva Espana, incense from Nueva Espana, 10 quintales of copper plenchuelas (tacks), 50 round shields from Nueva Espana.”

“What should be brought from Castile (Spain) are the following: 50 harquebus’s of flint and wick, 50 harquebus’s of wick that should not be from Vizcaya, 20 vallestas with their attachments, 50 pieces of armor for the head de caveca, 12 coats of mail (12 coracinas), fine gunpowder for the harquebus’s, artillery. ”

“The items to be bought in Lisboa (Lisbon) are the following: two slaves from those parts (one should be from China or Japan and the other from the Celebes) and speak the Malayan tongue, 12 black and red patolas (pieces of painted silk cloth from India), 8 chelas, 50 muries, 20 chaudies, 20 Malay tapestries, 20 rolled tapestries.”

As the commander of the expedition, Miguel Lopez de Legazpi (1502-1572) was a lawyer with a military background. When approached to lead the expedition, the sixty-two year old Basque was employed as a secretary in the Spanish government in Mexico City. Little did he know that he would eventually have to supplement the expedition’s growing expenses with his own privately held funds. In the instructions sent to him by the Royal Audiencia, he was ordered to fulfill five objectives. Firstly, he was to sail to the Philippines, while staying clear of the Portuguese held Moluccas. Secondly, once in the Philippines, he was to take possession of the islands on behalf of the Spanish Crown. Thirdly, he was to establish friendly ties with natives of the conquered territories, as well as learn as much as he could about their culture and customs and then report back to Spain with his findings. Fourthly, he was to set up a Spanish settlement and find a source of spices, which could be shipped to New Spain. And lastly, his

fifth instruction was to ensure that his chief pilot, Fray Andres de Urdaneta was dispatched to locate the return route to Mexico.

Miguel Lopez de Legazpi's fleet consisted of four ships and one small brigantine, which was connected by a toll line to one of the larger vessels. The larger ships were the *San Pedro*, the *San Juan*, *San Pablo* and the *San Lucas*. The expedition embarked from the Puerto de Navidad on November 21, 1564. Accompanying Legazpi on his flagship the *San Pedro* was Fray Andres de Urdaneta.

When the ships sailed from Puerto de Navidad, Legazpi ordered the captains of the other vessels to form a convoy in a similar fashion to those used by the Atlantic fleets. The capitana, his flagship was in the lead with the almiranta at the back of the fleet. The ships carried approximately 450 Spaniards and Mexicans. Of this total 150 were sailors and 200 were soldiers. Soon after sailing from Puerto de Navidad, one of the vessels had to return to port as the ship was in need of repairs. The expedition continued with the three remaining larger vessels and the small brigantine. The number of men on the ships was reduced to 350 men. The fleet reached the island of Guam on January 22, 1565, which was promptly seized on behalf of the Spanish Crown. From there, they sailed to the Philippine island of Samar which was taken on February 13, 1565. They anchored off the island of Mindanao and then sailed to several islands in the Visayas region of the Philippines before stopping at the island of Cebu in April 1565.

Having captured Cebu by force and destroying many of the homes of the islanders, a truce was signed with the natives on June 4, 1565. Legazpi had accomplished one of his objectives. He established the first Spanish settlement in the archipelago in Cebu. At the time, he wrote to the officials in Mexico City informing them in detail of his impressions of the Philippines. In his reports, he noted that the land had great potential for future exploitation. A number of Augustinian missionaries, in addition to Fray Urdaneta, accompanied the expedition and they began converting the natives to Catholicism. However, while many natives, including a local native chief adopted the new religion, the relationship between the Spaniards and the islanders could hardly be described as amicable.

At one point, Legazpi became aware of Chinese trade ships which were operating in and around the islands of the Philippines. They were involved in bartering goods with the natives who, in turn, sold them commodities they had grown or which were obtained locally. He inquired as to who the Chinese merchants were and was told that they were "Sangleys." This was the Chinese word for traders, "seng-li" in the Chinese language. The Spaniards mistakenly thought that they had identified themselves as a race of people from a country known as

"Sangley." As a result, from that point onwards, the Spaniards always referred to all Chinese they met as "Sangleys." From the Chinese, Legazpi learned that to the north of Cebu there was a mighty city (Manila), where they would find an abundance of provisions. As Legazpi was already experiencing a shortage of provisions on the islands of Cebu and Panay, he prepared an expeditionary force to cruise the area of the Muslim held city of Manila.

While he was still in Cebu, Legazpi also arranged to send the *San Pablo* galleon back to Mexico. The ship was commanded by his grandson, Felipe de Salcedo. Also aboard the vessel was Fray Urdaneta in the capacity as chief pilot. While the westward journey from New Spain to the Philippines was easier to accomplish due to the trade winds blowing west to east and enabling the ships to sail to the islands in three months, the return journey proved problematic. The route Fray Urdaneta discovered consisted of sailing the vessel in a northerly direction from the passageway of the San Bernardino Strait, located between the islands of Luzon and Samar, in the Philippines and leading to the Pacific. From there, the ship sailed north towards latitude 40 degrees off of northern Japan. The ship picked up the Kuroshio Current (also known as the Black Stream derived from the fact that the sea where the current flows is of a deep blue color). The Kuroshio Current begins off the coast of Taiwan and flows in a circular, clock wise pattern as far north as Japan. The current then merges with the North Pacific Current which flows in a westerly pattern taking the ship towards the coast of Northern California and Mendocino. The North Pacific Current is the Pacific's counterpart of the Atlantic's Gulf Stream. Once off the coast of California, the galleon sailed south to Baja California and then to Mexico's Cape Corrientes and Acapulco. By following this route, Fray Urdaneta reached Mexico on October 8, 1565 after sailing for four months from the San Bernardino Strait. The voyage was of a shorter duration as he sailed from Cebu and not from Cavite. Normally, when the galleons departed from Cavite it took about two months to reach the San Bernardino Strait and another four months to cross the Pacific to Mexico. In any case, the *San Pablo* became known as the first vessel employed in the galleon trade as it carried a small cargo of cinnamon from Mindanao.

Through Fray Urdaneta's accomplishment of charting the return route to Mexico from the Philippines, he was able to establish a sailing schedule for future galleons to follow. In conjunction with Urdaneta's new route, pilots were able to take advantage of the winds of the southwest monsoon, which enabled a vessel to sail from the Philippines following a northerly direction to the Kuroshio Current. Normally, the galleons sailed from the Philippines in June or July when the southwest monsoon winds were most prevalent. If the ships

sailed later than the monsoon period, they were in danger of finding themselves caught up in typhoons which could prove deadly.

While Fray Urdaneta sailed to Mexico, Miguel Lopez de Legazpi was struggling on the island of Cebu and Panay with an ever increasing need to provide provisions for the many men in his expedition. After exhausting the supplies of food available to them on these two islands, and after learning of the larger city to the north, he launched a naval campaign to seize the city of Manila away from the Muslims who were then controlling the area. The Muslims were quickly ousted from Manila and in their stead a newly established Spanish city was founded on June 24, 1571. No doubt, when Legazpi seized the city, he was probably surprised to discover that there were one hundred and fifty Chinese men and women living there. He was also surprised to find Chinese trade vessels anchored in Manila Bay. They were apparently involved in trade activities with the natives.

In historical accounts there is reference that a Chinese trade post may have already been in existence on the island of Jolo in the southern region of the Philippines, long before the arrival of the Spaniards in the country. Trade relations between merchants from China, India, Japan, Borneo, Arabic countries and other parts of Asia were established with the Philippines long before the Spaniards set foot on Philippine soil.

After the arrival of the *San Pablo* in Mexico, it was followed by the *San Geronimo*, which arrived at Cebu in October 1566. This proved to be a difficult journey for all those aboard the vessel as a mutiny arose on the ship. The captain was murdered by the mutineers and it was a miracle that the ship arrived in the Philippines at all. This was followed by another galleon the *San Juan* also known as the *San Juanillo*, which was commanded by Juan de la Isla. Two other galleons arrived in Cebu in 1568 from Acapulco. They were under the command of Felipe de Salcedo, Legazpi's grandson and traveling with him was his eighteen year old brother Juan Salcedo. After living in the country for nine years, Juan Salcedo died in the colony having participated in various military campaigns to conquer further territories in the Philippines.

Turning Manila into a Spanish City

When the Spaniards conquered the Philippines, they named the country the "New Kingdom of Castile." The country was given this name as the conquistadores who arrived in the archipelago, were serving the Spanish kingdom of Castile and Philip II. On the other hand, the Spaniards were referred to as "Castilas" or "Peninsulares" by the natives of the country. Once the Spaniards were settled in Manila, which was given the royal title of "Noble and Ever Loyal," the conqueror of the land Miguel Lopez de Legazpi, began to immediately

implement a plan for the defense and architectural design of the city. Unsurprisingly, he became the first governor of the colony by virtue of his conquest of the archipelago.

The city he designed was irregularly shaped with Manila Bay on its western side and the Pasig River to the north. On its eastern and southern sides it faced towards the land. The design Legazpi envisioned was architecturally similar to the many Spanish enclaves already in existence in Spanish settlements across the Americas. The city had its characteristically central square which was known as the Plaza Mayor or "Plaza de las Armas." Throughout the Spanish settlements a central square was known by that name and in the case of Manila this was also the case. The city streets followed a grid pattern "cuadaricula," whereby all the streets radiated outward from the central square in straight and perpendicular lines. The city was divided by individual blocks where buildings could be constructed in the future. In its early years, the structures to be found in the city were constructed by the soldiers who arrived in the country with Legazpi.

The city's most important buildings were located around the Plaza de Armas and these included the Royal Audiencia (Supreme Court), the Customs Building (Aduana*)*, the Governor's Palace (Palacio del Gobierno which was destroyed in 1863), the City Hall (Cabildo), the Royal Treasury (Real Hacienda), military arsenals and the main cathedral the Basilica of the Immaculate Conception which was constructed in 1581. When the Spaniards captured Manila from the Muslims (Moros), who were then controlling the area, they took over a small military fort which was located at the northwest section of the city. The wooden fort was eventually replaced by a sturdier stone fortress by the end of the sixteenth century.

Spaces were allocated within the city for the homes of the Spaniards who were expected to arrive in droves from Mexico and settle in the Philippines. Other spaces were reserved for the construction of churches and convents. Eventually, the city government constructed monasteries for the various religious orders operating in the country such as the Augustinians, Dominicans, Franciscans and the Jesuits. A number of hospitals were also constructed including one which was reserved for the members of the Spanish community. It was maintained and supported through funds provided by the king. During the time when Dr. Antonio de Morga lived in Manila in the last decade of the sixteenth century, he was quite impressed by the medical services provided in the city. He later wrote that, "The physicians, surgeons and apothecaries are so skillful and useful, that they cause many marvelous cures, both in medicine and in surgery."[16]

Serving as the lieutenant-governor of the Philippines, Dr. Antonio

de Morga was also a highly experienced judge in Manila's Royal Audiencia. After his term office in the Philippines, he returned to Mexico where he wrote a history of the Philippines in 1609. His book was entitled "Sucesos de las Islas Filipinas." Of the many buildings he noticed in Manila, he was most impressed by the governor's palace which he found was agreeably located near Manila Bay. He said that the palace was pleasingly constructed with windows facing the sea and the Plaza de Armas. From its location, cool sea breezes entered the rooms in the palace and provided a pleasant atmosphere for those who lived in the building or worked there. The two-storied structure was constructed with sturdy pillars and two interior courtyards. Galleries provided a large hall which also served as a venue for many governmental functions including the meetings of the Royal Audiencia. As the governor and his family lived in the palace, they found they had little privacy while residing there as the structure also provided office space for various governmental officials, as well as his own personal guards.

When the Italian traveler Giovanni Francesco Gemelli Careri, arrived in Manila during the 1690s, he was able to see the interior of the governor's palace where Governor General Fausto Cruzat y Gongora (1690 to1701), was then in residence. He later wrote that, "The hall of the audiencia was handsomely hung with damask. At the end was a great canopy and under it a long bench covered with silk on which the governor sat in the middle of the oidores (judges), who take their positions according to seniority with a great table before them covered in crimson velvet. The advocates or lawyers generally sit on two benches under the canopy and on another little bench the clerk. Below on the floor of the hall opposite are the judges, who, as they sit together in a body have the title of highness given to them. Adjoining to this hall is another room, where they meet to consult about important affairs. There is also a chapel to say Mass in, all well hung with damask and other silks."[17]

By the late sixteenth century the city took on a more formidable defensive aspect. The wooden military fort was destroyed over the years by the aftereffects of earthquakes and fires in 1583 and 1603. As a result of these disasters, the government under the administration of Governor Gomez Perez Dasmarinas (1590-1593), decided to fortify the city in a similar pattern to the defenses provided in Havana and Cartagena. The bastion system of construction was incorporated into the design employed by the government in order to completely surround the city with a sturdy stone wall and its own military citadel.

Just as Spanish ships and settlements came under attack in the Americas, they were also harassed by their enemies in the Asian region. When the Spaniards colonized the archipelago, Portugal,

Holland and England were all interested in seizing the islands away from them. They also tried to capture their treasure ships. The Portuguese made various attempts to oust the Spaniards from the country. They were reacting to Spain's seizure of the islands on the grounds that they claimed the rights to the archipelago, as well as to the Moluccas. When they purchased the Spice Islands from the Spaniards they were also under the impression that the Philippines were also theirs to conquer and exploit. They claimed that Spain was ignoring their rights to the islands and was conquering the archipelago through the use of force. The Portuguese made repeated attempts to drive Miguel Lopez de Legazpi out of the Philippines while he was based on the island of Cebu. One attempt came in December 1566, when a sea conflict arose between Spanish and Portuguese vessels. The Portuguese ships were under the command of Antonio Lopez Sequiera, while the Spanish vessels were led by Mateo de Saz. In another attempt, the Portuguese vessels under the command of Manuel Donelo and Jorge de Melo attacked Spanish ships.

During the early decades of the seventeenth century, the Spaniards also had to contend with a number of attacks launched against them by the Dutch. As the Spaniards did not allow European ships to anchor or visit Manila Bay, the Dutch became interested in ousting the Spaniards from the country. By then, the Dutch were increasingly spreading their sphere of influence into Southeast Asia and they viewed the Spanish presence in the archipelago as a threat to their own trade operations in the region. Eventually they seized the Spice Islands and the island of Java (Indonesia), as well as establishing a trade post in southern Taiwan. The fact that they had a base in Taiwan may have been part of a plan to eventually attack the Spaniards from their trade posts in the north and to the south of the archipelago. They were apparently interested in controlling the entire region and its lucrative spice trade and viewed the Spaniards as competitors.

Even though the colonial government did not allow Europeans to trade at Manila or to settle in the country, several Spanish governors in the seventeenth century were involved in an unofficial trade with the British East India Company in India. The governors who were involved in this trade were Manuel de Leon (1669-1677) and Juan de Vargas Hurtado (1678-1684). The East India Company officials were enthusiastic about this business that they formed trade agreements with Indians, Parsees, Armenians, the Portuguese and other Asian merchants in the region in order to entice the Spaniards into continuing their ongoing trade with them. The Asian traders also represented the officials of the East India Company in trade negotiations with the Spaniards. The exports purchased by the East

India Company from Manila included various types of wood, silver, copper, wax, tobacco, leather and sugar. In return, the Spaniards imported products such as textiles, lace, cut diamonds, saltpeter and iron from India.

But despite the unofficial trade practices between the British and the Spanish merchants in Manila, there was still an ongoing security concern. The colonial government felt that it was a target for potential attacks and as a result it had no choice but to reinforce Manila and turn it into a fortified city. On a much broader scale, the Philippine archipelago was also deemed a part of Spain's defensive perimeter on its Pacific side.

After the city's defenses were strengthened, it was surrounded by a wall of thick and heavy volcanic stone blocks, prominent bastions and its own military citadel Fort Santiago (La Fuerza de Santiago). Atop its broad walls were numerous bronze cannons manned by soldiers and ready to defend the city if attacked by sea or by land. The bastion system incorporated a combination of straight and curtained walls with parapets, main and postern gates and a moat. The newly constructed fortified city of Manila became known as, "La Nuestra Senora de Guia." Although Governor Gomez Perez Dasmarinas had begun the construction process, he was not able to witness its completion in the early years of the seventeenth century. He was assassinated in 1593, during a mutiny by Chinese sailors while he traveled aboard a vessel in the Philippines.

During this same time period, additional fortifications were added to the port city of Cavite. Within its fortified walls was Fort San Felipe, which served as a first line of defense for Manila and guarded the entrance to Manila Bay. One of the main characteristics of the type of fortified cities the Spaniards were fond of constructing was the fact that they were usually located on major bays or secure harbors. In the case of Havana, two of its fortresses were constructed at the mouth of a channel leading into the Bay of Havana, while additional forts were positioned along the shores of the bay and within the city. This was also the case in Cartagena and in Manila. Another feature of a fortified city was the establishment of a shipyard to cater to its needs. In Havana, Cartagena and Manila the shipyards provided the facilities required for the construction of sea vessels, as well as the services of repairing and careening them. Warehouses and workshops were usually located within the shipyard complex in order to attend to the work required on the ships, as well as storing supplies, equipment, weaponry, ammunition and cargo for the vessels. Housing and offices for the government officials was also located in the fortifications, as well as barracks for soldiers and those employed to carry out the physical work on the sea vessels.

Mighty fortresses such as those constructed in Havana and Cartagena, served as an example of the fortifications built to combat enemies of the Spain and protect their Atlantic fleets. But unlike Havana or Cartagena, only the Philippines would eventually have a unique and extensive array of defensive fortifications spread across the archipelago and numbering more than one hundred. As the archipelago was composed of seven thousand islands, it was necessary to construct fortifications of varying sizes and types across the country to defend against enemy encroachments or raids by Muslim pirates who were continuously in search of natives to sell as slaves. Throughout the period of colonial occupation, the Spaniards built many of the fortifications which in some cases fell into disuse and were abandoned, while others were maintained and continued in use. As an example of the extensive array of fortifications to be found in the archipelago, the island of Luzon had as many as fifty-two fortifications of varying types and constructed for differing purposes.

When Field Marshal and Brigadier General, Governor Fernando Valdes Tamon prepared several reports for Philip V in 1729 on the defenses to be found in the Philippines, he focused his attention on twenty-five major fortifications in the country. In each of the larger forts, which were then in use, they all had the requisite number of officers and soldiers who were usually Filipino recruits with a few Spaniards in mostly command positions. The forts were constructed of varying sizes, but most were surrounded by heavily reinforced outer walls. Several of the forts had the classic wall and bastion arrangement. The most popular design apparently was the square shaped structure with a bastion located at each of its four corners. A main gate led into the structure and its large courtyard where barracks and official buildings for officers and soldiers were located.

As the archipelago's location is in an area of the world where there are many active volcanoes, it has been continuously prone to disastrous volcanic eruptions and earthquakes. Moreover, every year it is subjected to the effects of two monsoon seasons, one from the north and the other from the south, as well as a deadly round of severe typhoons. As a result of these weather patterns and natural disasters, the Spaniards early on realized that their structures had to be constructed to withstand the aftereffects of earthquakes and tropical storms. The earliest buildings were constructed of flimsy local materials out of necessity. This entailed using bamboo (cana) and palm thatch (nipa) woods for the walls and roofs of houses. These were later replaced by a combination of timber and stone when house construction was basically taken over by Chinese builders residing in the city.

Dr. Antonio de Morga described the houses in Manila during the

late sixteenth century saying that they were built of stone with roofs of clay tiles, while other houses still used palm thatch as a roofing material. He said that the houses were "lofty and spacious, and have large rooms and many windows, and balconies, with iron gratings, that embellish them." The sturdily built two-storied structures were constructed using heavy volcanic stone blocks for the ground floor. Thick wooden posts supported a beamed roof and they were attached to the walls using wooden pegs. The upper floors were composed of wood covered in plaster and surrounded by overhanging balconies with numerous windows. Windowpanes were made of translucent capiz seashells allowing a defused light to filter into the rooms. In the main entryway into the house was a courtyard with stables and storage areas off to the side where the family's carriages and horses were kept.

Over the years, the walled city became known as "Intramuros," or the area within the walls. Located in the surrounding areas of Manila were the neighborhoods of the Filipinos, Chinese, Japanese and Muslims. This area was known as "Extramuros," or the area outside of the city's walls. While Manila became the exclusive domain of the Spaniards who lived within its six hundred houses, some individuals chose to live in the neighborhoods outside of the city walls especially if they were destitute and poor.

According to various chroniclers of the sixteenth and seventeenth centuries, Manila was considered a thriving and comfortable city. The prosperous Spaniards lived there luxuriously. One chronicler, Fray Casimiro Diaz (1693-1746), an Augustinian missionary and the author of "Conquistas de las Islas Philipinas," commented on the lives of the affluent residents of the city saying, "Not content with having a town house, (they) took to building summer houses on both banks of the river even more sumptuous than those in the city, with spacious swimming baths in the river strongly fenced in with decorative enclosures to keep out the crocodiles with which the rivers of this country abound. Because it is much cooler in these houses, being so near the water, people escape to them from the summer heat, taking frequent baths."[18]

Still, another chronicler, Bartholome de Letona, described Manila in 1662 saying, "The streets of the city are beautifully laid out, and level, like those of Mexico (city) and Puebla. The main plaza is large, rectangular, and well proportioned. Its eastern side is occupied by the cathedral; the southern, by the government building, which is a splendid palace, large, handsome, and very spacious. The northern side of the plaza contains the cabildo's house, the jail, and other buildings that belong to private persons. The houses of the city (are) of hewn stone with handsome iron balconies and rows of windows,

and built in costly style. Much of (Manila's) material grandeur and beauty was destroyed by the earthquakes (in 1645 and 1658), but it lost not the essential greatness which it has and always has had as a court and illustrious commonwealth."[19]

So Few Spaniards Lived in the Philippines

During the entire period of colonial rule, there was never a large community of Spaniards living in the country. From 1565 to 1898, the population figures for the Spaniards residing in the Philippines ranged from as low as 400 in some years to as high as 4,000 by the nineteenth century. In the seventeenth century, there were only about two thousand Spaniards living in the Philippines and during the eighteenth century, the population levels of Manila fluctuated as Spaniards began moving to the suburban areas outside of the city. In comparison, and to the dismay of the Spaniards, there were thousands of Filipinos, Chinese and Muslims living in the country throughout this same time period. The Spaniards often felt threatened by the fact that they were so few in numbers compared to the overall population.

With so few Spaniards living in the country, it was difficult for the colonial government to fully exert its influence throughout the entire archipelago. In fact, it was never able to completely conquer Mindanao and the Sulu Islands to the south of the Visayan chain of islands. While the majority of Spaniards resided in and around the country's capital and its port city of Cavite, only a smaller number of Spaniards could be found in the other islands where they were employed by the government, the military or belonged to the various religious orders operating in the archipelago.

The main obstacle, for most individuals who were approached to relocate to the Philippines, was clearly due to the fear of not knowing if they could survive the journey across the Pacific. Another concern was whether or not once in the Philippines they would be able to endure the daily hardships of life they expected to experience in the colony. Their only incentive for accepting a position in the Philippines was the reputed opportunity to amass a fortune. By investing in the galleon trade or by becoming involved in the corrupt practices of the government, military or in religious institutions, a Spaniard could accumulate enough funds to eventually return home to the Americas or Spain and establish a business, purchase an estate or simply retire.

In a letter dated December 6, 1576, Viceroy Martin Enriquez of New Spain wrote to the king lamenting about how difficult it was to find individuals who were willing to work in the Philippines. He said, "In the dispatch of the ship that has to go to the Philippine islands, I am aware of the great difficulty and of the cost. The hardest part of all is the people because there is nobody who would dare go there (to the Philippines), not even the natives born in this land (Mexico) nor those

coming here from Spain because they hear of the hardships and little advantage there is. On the other hand this land (New Spain) has more to offer and I cannot uproot them from here. Even if the Justices of the Peace arrest, punish and harass them under the pretext of vagrancy or unemployment, they still refuse to leave. However, I will try to send those I can." [20]

Some young men willingly went to the Philippines as they thought that they might become rich in the process. But on the whole, it became a major struggle for the Mexican government to continuously find men to fill jobs in the Philippine government and in its military garrisons. In some cases, the paperwork detailing how many men were ordered to go to the Philippines may have contained exaggerated figures. Archbishop Diego Camacho wrote to the king about this subject saying, "On the basis of information which I gathered in New Spain and my own personal observation, I am constrained to call Your Majesty's attention to the painful fact that the funds for sending army units to these islands are spent on imaginary soldiers. The expense accounts, duly itemized, are sent to Your Majesty from Mexico, but it is all money wasted. Eight companies are enlisted in New Spain. Their captains pay to be put on the retired list and the enlisted men leave Mexico without them. They draw pay from Your Majesty but being retired officers they stay at home. Other captains are appointed from among the civilians who are coming to these islands in any case. These take charge of the troops if indeed any troops arrive for there at Acapulco the eight companies have dwindled to twenty or thirty boys. The muster is made up from among the galleon passengers, who with the connivance of the royal treasury officials are thus afforded free passage and soldiers' pay. When the galleon drops anchor here, Your Majesty's troops consist of four boys – a most lamentable business altogether – all that money spent and nothing to show for it." [21]

Spaniards who came to the country to work for the government did so for a contracted period of eight years according to the "Recopilacion de Leyes de los Reynos de las Indias" (the Spanish laws governing the colonies). When contracted for an appointment, it was not uncommon to find that some individuals found one excuse or the other in an attempt to avoid traveling to the colony. At times, these same individuals hid away in Mexico and did everything possible to evade the government or church officials who were searching for them. In order to dodge or postpone the journey to the colony, they often resorted to stalling government and church officials. Some even went so far as to abandon the clergy rather than face going to the Philippines. At other times, the Mexican government had no choice, but to use physical force in order to get appointees to the galleon which was sailing to the Philippines.

But despite the opportunities to become wealthy and live lavishly in Manila, few Spaniards had any inclination to travel to the Philippines or to reside there as long-term residents. Consequently, the majority of Spaniards and Mexicans, who ventured to the Philippines for the long haul, were primarily members of various religious orders, which were concerned with saving souls rather than silver dollars.

The fortunes of the Spaniards in Manila often ranged from the very wealthy to abject poverty. Some made their fortunes by investing in the galleon trade or through other methods such as accepting bribes in return for favors. The wealthier Spaniards dressed in luxurious silken garments and lived in homes adorned with the finest furnishings from Spain, China and Japan and drove around the city in exquisite coaches driven by drivers and fine horses.

A typical Spanish house consisted of a living and dining room, bedrooms, kitchen, bathroom and servants quarters. The family generally lived in the upper floors of the houses. Windows overlooked the streets below and allowed cool sea breezes to circulate throughout the rooms, thus helping to dispel the city's sweltering heat. Homes were sparsely furnished, but succeeded in creating a European ambiance with paintings, mirrors, crystal chandeliers, writing desks, carpets and other European furnishings which created a comfortable environment. In their homes, they entertained lavishly using the porcelains brought to Manila by the Chinese junks every year and served a multitude of rich foods provided in the colony. The Spaniards were also well stocked with the foods they were accustomed to eating in Spain and which were imported into the colony from Mexico.

The Spanish ladies often wore loose cotton gowns during the day and finer silk garments for special occasions. They adorned themselves with numerous chains of gold, crucifixes, earrings and rings studded with gems of every sort. The men wore European fashions even though they were uncomfortable in the tropical heat.

Dr. Antonio de Morga described the Spaniards of Manila saying, "The streets, squares and churches are generally filled with people of all classes, especially Spaniards – all both men and women, clad and gorgeously adorned in silks. They wear many ornaments and all kinds of fine clothes, because of the ease with which these are obtained. Consequently, this is one of the settlements most highly praised by the foreigners who resort to it, of all in the world, both for the above reason and for the great provision and abundance of food and other necessities for human life found there and sold at moderate prices."[22]

If the traveler was fortunate enough to survive the journey across the Pacific to the Philippines, he was soon after arriving there subjected to the debilitating effects of the hot and humid climate. The tropical temperatures had an adverse effect on Europeans who were

more accustomed to temperate climes. Even though Le Gentil was most likely exaggerating when he wrote the following comments, there was probably a modicum of truth in his statement. While he was in Manila in the mid-eighteenth century he felt the effects of the tropical heat and wrote, “It is so hot in Manila that one cannot apply oneself intensely. The constant and profuse perspiration produces an almost continuous lassitude and depression, and the mind suffers from it. In that suffocating country all one does, so to speak, is to vegetate. Intense study and too close application generally produces insanity.” [23]

Moreover, a variety of tropical diseases awaited the weary traveler including the dreaded “bloody flux” or dysentery. This one particular malady killed many travelers to the islands. The other hazard awaiting the individual, who went to the Philippines as part of an employment contract, was the need to support oneself and this was often difficult. If the individual was unlucky and lacked the funds to carry on his life in the colony, he was soon pining for home. However, if he was fortunate and had invested in the galleon trade, he could have easily become rich overnight. However, according to Le Gentil, the Spaniards in Manila spent all their money just as soon as they received it without a thought about tomorrow. He said that, “The Spaniard in Manila spends everything he makes without giving a thought to the distant future. He only thinks of the galleon which is on the way to Acapulco and which will bring back to him the means with which to pull through the year. Thus his ambition lags from galleon to galleon and goes no further. He sees that it is impossible for him to raise himself above his state. He thinks nothing about cultivating the soil or engaging in trade of any kind. The galleon suffices for his present means and with this he rests content. But if the vessel fails to return, which has happened more than once, he dies in misery or vegetates in poverty. ”[24]

In comparison to the larger communities of Filipinos, Chinese, Muslims and indigenous inhabitants of the country, the Spanish community was miniscule. For many of the Spaniards who arrived in the Philippines, they tended to view their presence in the country as just a temporary setback. As far as they were concerned, they likened their stay in the Philippines to that of someone staying in a hotel for a short period of time. Another Spanish visitor said his experience in the country was similar to that of a traveler who arrives in town and never quite unpacks his luggage as he has no intention of staying there for very long.

The Filipino historian De la Costa wrote of the Spaniards who arrived in the Philippines and their unwillingness to put down roots in the country. He felt that by their not settling in the archipelago on a permanent basis, this led to a lack of interest in the development of

the country. “Perhaps the real trouble was not so much that the Spanish settlers in the Philippines were not virtuous, as that they were not really settlers. They had not, even after all that time, really settled down in it – struck root, spread out and taken hold of the country – identified with it so as to feel that any attack on any part of it was an affront and injury to themselves. Setting aside the clergy, who had come to stay, many if not most of the Spaniards in the Philippines were really transients – officials patiently endured the hardship post for the sake of higher pay or the prospect of promotion, or private citizens who had come out to make a fortune and having made it, go away and spend it in some more congenial climate. It could not be otherwise as long as the Philippines were nothing more to Spaniards than a kind of floating dock upon which to trans-ship bales of China silk from junk to galleon.”[25]

Many of the Spaniards who arrived in the Philippines were highly educated and followed career paths in the government, military or were involved in the religious institutions trying to convert and save Asian souls through Christianity. They were originally from various regions in Spain and included Basques, Gallegos and Andalusians. Once settled in the Philippines they tended to congregate together with Spaniards from their home regions and formed small cliques with little social interaction with fellow countrymen from other areas of Spain. Unless a newly arrived individual was from one of the same regions in Spain as those individuals already in the colony, he often found himself isolated from the others. The only sense of unity and loyalty amongst the Spaniards was relegated to the individuals born in their own hometowns or provinces in Spain.

By the mid-eighteenth century, there were three groups of Spaniards living in Manila. The first were the wealthier Spaniards and their servants. These Spanish individuals were usually working for the government. The second group was composed of the members of the many religious orders operating in the city. The third group consisted of officers and soldiers in the military garrison of Fort Santiago.

As there were so few Spaniards living in Manila, the majority of the houses remained empty, abandoned or in various states of deterioration. This unfortunately led to the fact that the city was not occupied by the same individuals on a continuous basis and, in turn, led to the city’s decline. Those Spaniards living in the city had no desire to make improvements to the country’s infrastructure. This lack of interest meant that little of consequence was added to the country’s infrastructure for the benefit of the Filipinos or the Spaniards. In 1606, other than investing in the galleon trade, the Spaniards owned twenty-four cattle ranches in the areas outside of Manila with some owners having as many as four thousand head of cattle. The Spaniards

allowed their cattle to freely roam around the countryside, which led to the destruction of farmlands owned by other individuals.

It was interesting to note how Spanish society lived in Manila. “An air of affluence and contentedness marked the demeanor of the Spaniards during the early period of unrestricted galleon commerce. As the heat of the day passed, the Manilenos generally clad themselves in clothes made of silk and other fine fabrics, left the precincts of Intramuros, and sought relaxation by engaging in a leisurely promenade along two drives extending outwards from the walled city. Each evening towards sunset the Manilenos strolled or drove along these tree lined public ways, using the occasion to display their finest clothes, horses and carriages. This end of the day parade, which had already become diurnal event before 1600, continued throughout the colonial period. ”[26]

The most interesting description of the Spaniards in the Philippines was provided by Father Pedro Murillo Velarde in the eighteenth century. He said that, “The Spaniards have settled and populated America because of its productivity. On the other hand, since there is not here a stable economy of agricultural estates and basic industries, those who migrate to these islands are, as it were, in an inn; they do not look upon it as a home where they intend to settle permanently. They come as transients, they marry by accident, and they die in expectation of leaving. Where is the family here that has survived several generations? Of the first settlers, hardly anything remains but a dim and distant memory. The father amasses a fortune, the son squanders it, the grandson goes begging, and there is an end to the entailed estate, the plantation, the family, the noble line, the reputation and the name. Even he who today is rich and powerful may tomorrow, by two somersaults of fortune, be thrown penniless out on the street. This, because even the greatest fortunes have no more solidity than the waves of the sea on which they float, over which they sail, by which they are tossed and in which they sink. Wealth has no roots in this country, and the logical consequence is that the settlers are few, the islands unpopulated, and their temporal and spiritual conquest unfinished. To this state of backwardness there is a prompt and potent remedy which the more advanced nations have adopted to their great advantage. It is the formation of chartered companies. These have become as it were the public and permanent reservoirs from which the national wealth flows in a steady stream and is equitably distributed to all according to the capacity of each.”[27]

The Non-Spanish Residents of Manila

By the beginning of the seventeenth century, Manila’s population had grown to 28,000 inhabitants. In 1620 it rose to 41,400, but as the population increased, the Spanish community continued to remain

small with only 2,400 Spaniards living in the entire country. In comparison, by this time, there were 16,000 Chinese residents in Manila, 3,000 Japanese and the larger population composed of Filipinos and Muslims.

The Filipinos, Chinese and Japanese residents of Manila lived outside of the city's walls in the neighborhoods of Ermita and Malate, as well as in smaller villages located in the suburbs. Their homes were simply constructed of various types of woods, but mostly used the readily available supplies of bamboo and nipa thatch for roofing. The Filipinos or native population were referred to by the name of "Indians" or "Indios" by the Spaniards. This is the name they used in the New World colonies for all of the natives they came into contact with since the time of Columbus who was convinced he had discovered the East Indies. This was also the case in the Philippines where the natives were referred to as "Indians."

As the church gained a greater hold on the native population through conversions to Christianity, it tried persuading as many Filipinos as it could to live closer to the church in order to keep track of them. It was said that the Filipinos lived "bajo las campanas" or within hearing distance of the church bells. The livelihoods of the natives consisted of small scale farming and selling the produce they grew in open air markets. All sorts of produce and other products were sold at the market including fruits, vegetables, animals, salt, fish, wood, tobacco, earthenware, baskets and other items such as textiles. They usually farmed tracks of land which were owned by wealthier individuals who were normally Spanish land owners (encomendarios), but in exchange, they provided the owner with a portion of their harvest. The taxes they paid to the government usually consisted of the produce they grew on the land rather than cash. Some Filipinos worked as day laborers and yet others, were conscripted to work for low salaries for the government on construction projects or building the galleons and other vessels. When working on the galleons, they were usually involved as laborers: carting large, heavy logs to the shipyards. When conscripted for construction projects, such as building structures in the city or military fortifications, they again served as laborers.

By the late sixteenth century and into the early decades of the seventeenth, Japanese refugees began arriving in Manila from Japan. As they were persecuted in their own country for their religious beliefs as Christians, they had no choice but to go into exile. If they remained in Japan, they could be arrested and executed. Given the fact that the refugees were Christians, the Spaniards welcomed them to Manila and provided them with an area in the city where they could live. The Japanese neighborhood was located just south of the Chinese Parian

and beyond the walls of the city of Manila. They were assigned to live in that area, as it came under the religious jurisdiction of the Franciscans, who spoke Japanese and could assist them in their daily lives. The area was known as Dilao, and it was located where the present day National Museum of the Philippines currently stands in Manila.

Even though the Spaniards permitted the Japanese to stay in Manila, they apparently viewed them with a mixture of fear and awe. The Spaniards thought that they were too disciplined in their daily lives and that they were militaristic. But despite these feelings of anxiety towards the Japanese, the Spaniards hired the Samurai to work for them as mercenaries in the city, as well as serving on the galleons as part of the crew where they were employed as soldiers.

Consequently, by 1595, there were approximately one thousand Japanese men, women and children living in Dilao. According to the description provided by Dr. Antonio de Morga, in the early years of the seventeenth century, there was every indication that he thought they were culturally intriguing. They apparently clung to their Japanese customs – eating only Japanese style meals and dressing in their native costumes. While in Manila, they did not adopt any of the Spanish, Chinese or Filipino modes of living as their own. Even the types of houses they lived in, followed the house styles they were accustomed to in Japan - made of wood and thatch building materials which were easily available in Manila. Even though in Japan, during the sixteenth and seventeenth centuries, only the very rich or aristocrats lived in buildings made of anything other than wood and thatch, the noblemen who arrived in Manila with their families and retainers, made do with whatever was available to them in the city. They were apparently just pleased to have escaped from Japan intact and alive.

Dr. Morga wrote of them saying, “They are energetic people of good disposition and are brave, who dress in their own particular habit, that is, quimones (kimonos) of colored silk and cotton, falling down to the middle of their thighs open in front, wide and short trousers, tight gauze stockings. They wear shoes, usually sandals, the soles being of strongly woven straw, with their heads bare, close shaven from brow to the top, the hair, falling down from the back of the head and tied around the cranium with the graceful knot, with scant beard, large and small katana swords on their waist. They have a noble bearing, observe many ceremonies and courtesies, and are ready for any emergency and need. One can get along well with those who have embraced Christianity and they are pious and great observers of religious worship, because they are impelled by no motive other than salvation. ”

While the Japanese managed to carry on their lives in Manila, trade vessels continued to arrive on a yearly basis from Japan. The Japanese merchants brought cargoes to the city and returned home with Chinese, Spanish and Filipino goods. They also transported additional refugees to Manila who were seeking sanctuary. At one point in 1606, the Japanese population of Dilao rose to 1,500 persons and by 1624 there were as many as 3,000 Japanese in Manila. When Japan closed its doors to the outside world in 1639, all ties with the Spaniards in Manila were essentially cut. This meant that the flow of Japanese immigrants to the Philippines ended. With time, those Japanese that remained in Manila were assimilated into the local population or returned home.

In addition to the Spaniards, Filipinos, Chinese and Japanese who were living in the Manila during the sixteenth and seventeenth centuries, there were Mexicans who arrived in the country on the galleons. These were usually individuals born in Mexico of Spanish ancestry or Mestizos (of mixed parentage usually Spanish/Indian parents). If the individual was not born in Spain, he was not considered a peninsular (a Spaniard), but a Creole, someone born in the colonies. The Mexicans who arrived in Manila were not always of the best sort and included many petty criminals.

With so few Spaniards working and living in the Philippines by the beginning of the seventeenth century, the government in Mexico tried its best to increase the Spanish population of the colony. In many instances, the Spaniards who arrived in the archipelago were the least desirable types consisting of individuals the Spanish officials in Mexico were anxious to eject from the country. These undesirable individuals included carpetbaggers, the chronically unemployable, vagabonds, who without education or of good character according to the Spanish officials, were still qualified enough to be appointed to high government positions in the Philippines or to serve there as military officers and soldiers.

As a last resort, the Mexican government began emptying its prisons and transported convicts to the Philippines where they served as officers and soldiers. Prisoners were offered a pardon if they agreed to go to the Philippines, as well as a yearly income of one hundred and twenty five pesos. When appointed to the position of an officer in the Manila garrison, these criminals became the country's worst nightmare, as they were the most abusive towards the Filipinos. In 1677, Mexico sent a galleon to Manila, the *Concepcion*, which sailed from Acapulco with a number of criminals aboard. As soon as the galleon arrived in the colony, they were expected to work as soldiers in the various fortifications located throughout the archipelago.

Spanish Colonial Government

As a Spanish possession, the archipelago came under the jurisdiction of the viceroyalty of New Spain. Any major decisions concerning the newly acquired colony had to be approved by the viceroy who was headquartered in Mexico City. The viceroy was a royal appointee especially selected for the post by the king and consisted of a member of Spain's nobility such as the sixteenth century viceroy Luis de Velasco, who was also the Marques de Salina. His official title was viceroy of New Spain, but he was also a captain general with the Philippines coming under his authority.

The individual selected for the role of viceroy basically reigned like a king in the region he was assigned to govern. He had all the authority and comforts a member of the royal family might have enjoyed, even though he was not directly connected to the royal family in Spain. The bottom line was that the viceroy represented the king in his faraway territories. However, while he held immense power, there were checks made on his activities to ensure that he remained within the bounds of morality and scruples which were comparable to those of the Spanish government in Madrid.

There were so many restrictions imposed upon the lives of viceroys such as a strict dress code and the fact that they could not attend bullfights or other amusements. As a result, they led an almost monk-like existence, but were handsomely compensated with high salaries of approximately 12,000 silver reales a year. The salary was considered an exceedingly generous income at that time.

There were two methods by which his activities as viceroy came under scrutiny and the first was the "residencia." This was a legally conducted investigation into his activities during his term of office. It was instigated on behalf of the king when the viceroy returned to Spain. However, a residencia was rarely conducted. The other method was to allow the Royal Audiencia of the country the viceroy was living in to scrutinize his conduct. But again, this method was also questionable as to whether or not it was very effective in monitoring his activities, as he also served as the president of the Royal Audiencia.

The powerful role played by the Royal Audiencias in Spain's overseas possessions, including the Philippines, where it was established in 1583, was to initially serve as a court of appeals. The Royal Audienica also served as a monitor of ecclesiastical tribunals and communicated directly with the king and the Council of the Indies (administering the settlements in the Americas and also in Asia). Over the years, its authority became increasingly extensive as it dealt with administrative, military and political matters. Although the Royal Audiencia was modeled on a similar entity in Spain, the overseas model became more powerful than its counterpart in the peninsula,

which was not allowed to handle political and military matters. Each Royal Audiencia in the colonies was headed by a president which was often the governor general of the area in which it was located. It was not an organization that had to report every move to officials in Spain, but was allowed to act independently.

The Royal Audiencia was composed of four carefully chosen judges (oidores). These individuals could only be selected if they had been born in Spain and not in any of the overseas possessions. They earned a salary of approximately 2,000 silver dollars a year. There was also one attorney general (fiscal), assigned to the Royal Audiencia. Both the viceroy and the judges were prohibited from marrying native women, and they could not be involved in trade of any sort or permitted to purchase land in the country's in which they served the king.

It was a standard practice to set up a Royal Audiencia in the various countries of the viceroyalty such as the one in Santo Domingo which was established in 1526. Other Royal Audiencias were set up in Mexico City 1527; Panama 1535; Lima 1542; Guatemala 1543; Guadalajara, Mexico 1548; Santa Fe de Bogota, Colombia 1549; Venezuela 1559; Quito, Ecuador 1563; Chile 1609, and Buenos Aires in 1661. Even though the Philippines came under the jurisdiction of the viceroy of New Spain, it was allowed to have its own Royal Audiencia. The governor of the colony also acted as the president of the Manila Royal Audiencia and it was provided with a number of judges.

As in New Spain, the Laws of the Indies applied to the Philippines and royal decrees, rules and regulations were passed to oversee the functioning of the colony and the activities of the galleon trade. The governor had the right, as the king's representative in the Philippines, to authorize and contract the construction of the galleons at the Cavite shipyard and to appoint the skilled men who were in charge of completing the projects.

Silver Subsidy from the Viceroyalty of New Spain (Real Situado)

The income of the Spanish colonial government in Manila was derived from tributes or taxes paid to it by the Filipinos and Chinese living in the capital or residing in the islands of the archipelago. It was never able to sufficiently cover all of the government's yearly expenses. While the Chinese residents and trades people in the city may have paid their taxes in silver, this was not the case with the Filipinos. They were unable to pay their taxes in cash to the Spanish officials but in kind. This simply meant that they paid the taxes by providing the government with the provisions and supplies they used on the galleons and galleys, such as the abaca plants they grew on the land and which were turned into ropes and cables; the cloth woven by

weavers in Ilocos for ship's sails, and the hundreds of chickens and other animals they provided to the colonial government rather than paying in pesos they did not have. As a result, the government depended on the yearly subsidy or "Real Situado" provided to the colony by the viceroyalty in Mexico City.

The fact, that corruption was also rampant in the "encomienda system" that is, the land distribution system amongst the Spaniards, and within the government, meant that the Mexican subsidy became an absolute necessity in order to pay for its yearly expenses. The encomienda system was put into operation when the country was conquered by Miguel Lopez de Legazpi in 1565. It was a system of land distribution amongst the conquistadores of the country who received large estates as gifts for their part in the conquest. The system had been in effect in the New World settlements and was continued in the Philippines. The taxes the government received were used to pay the salaries of civil servants in the government, military officers and soldiers, and religious individuals in the church, as well as paying the expenditures of the hospitals, schools and other social projects.

According to a report sent to the king in 1628 by the Governor of the Philippines, Juan Nino de Tabora (1626-1632), he stated that his governmental expenses were considerable and came to more than 500,000 pesos a year. He had to pay the salaries of government functionaries, expenses and wages of military personnel and garrisons located throughout the colony, as well as allowances to members of the clergy for their day-to-day expenses. Additionally, the government had to pay the expenses involved in organizing the galleons and the construction of four galleons and four brigantines. Clearly, it was necessary to receive the subsidy in order to offset the enormous costs of running the government and its expenses.

If the colonial government mounted military campaigns against the Muslims for example, these costs were added to the yearly expenses incurred by the government. But in some years, the subsidy never arrived in the colony. If a galleon bearing the subsidy was destroyed due to severe weather at sea or captured by an enemy vessel, the entire colonial government was thrown into disarray. The interesting point to note was the fact that the actual funds for the subsidy did not come out of the Royal Treasury in Mexico City, but consisted of the customs taxes placed on the exports entering Acapulco via the galleons. After these funds were collected from a galleon's master, they were returned to Manila and labeled by the Mexican government as the Real Situado for the Philippines. The Real Situado normally consisted of 250,000 pesos. As a result, it was unnecessary for the government in Mexico City to dip into its own funds to pay the

subsidy, as the buyers of the goods in Mexico were indirectly paying for the financial support of the colony.

Instead of depending on the subsidy to maintain the colonial government in the Philippines, the Spaniards could have placed a greater emphasis on developing the country's economy. By doing so, they would have derived all of the extra funds they needed to maintain the government. But they were not interested in following this path, and instead, focused on the galleon trade as their main source of profit and revenue. As pointed out by Le Gentil, if the Spaniards had been able to develop the Philippines in the same manner as the Dutch in Batavia and the Moluccas, the country could have become a source of immense wealth for Spain. Rather than simply depending on the galleon trade and the Royal Subsidy for its existence, it could have weathered any diversity if it had developed other businesses in the country other than the galleon trade.

Spanish Influence in the Provinces

By 1591, the Spanish colonial government's sphere of influence had spread to thirteen provinces in the country. Each province was governed by a mayor (alcalde) who also served as its magistrate and resided in the provincial capital (cabeceras). However, in many of the country's provinces, the only Spaniards the Filipinos were exposed to on a daily basis were the members of the clergy, who were either missionaries or Catholic friars. As the natives were not accepted as equals by the Europeans, it was difficult to say whether or not they had been completely "Hispanicized" by the Spaniards. It was only in the larger cities of the archipelago such as Manila and Cavite, where Spanish ideas and norms affected the native population to a greater extent. During the nineteenth century, Spanish influence was far greater amongst the growing Mestizo class of Filipinos, as they became increasingly prosperous and highly educated.

In the Muslim occupied territories of Mindanao and the Sulu Islands, the natives located there, followed Islam and had never converted to Catholicism during the Spanish colonial period. The colonial government was unable to completely colonize these regions due to Muslim resistance to the military encroachments made by the Spaniards. Numerous conflicts arose between both groups whenever the Spaniards tried to penetrate Muslim held regions. There were also a large population of indigenous people in the country, which were also able to resist Spanish rule and these individuals normally lived in inaccessible regions such as in mountainous areas or within the interior of islands where it was difficult to reach them. Consequently, Spanish rule was limited in the Philippines, and throughout the colonial period from 1571 to 1898, they were not able to completely colonize the entire archipelago.

Opposition to Spanish rule was evident, in that, there were a number of revolts and rebellions launched against the colonial government. The Spaniards had to contend with uprisings by the Filipinos, Chinese and Japanese against their rule, as well as continuous conflicts with the Muslims. The confrontations with the Filipinos, Chinese and Japanese were usually due to the exploitative nature of the Spaniards who asked for excessive taxes and forced them to work on their many work projects. In the case of the Muslims, the conflicts arose due to the fact that they continuously resisted Spanish rule and conversion to Catholicism. However, as they were also raiding Filipino and Spanish settlements in the Visayas, they were often in conflict with Spanish military forces which were engaged in defending these areas. The raids were conducted by the Muslims in order to capture Filipinos who were sold as slaves to buyers in other neighboring Asian countries. To combat the Muslim attacks, the Spaniards resorted to building fortresses throughout their settlements, but these were often manned by so few soldiers and artillery that the Muslims were soon back to raiding the villages.

Spread of Catholicism

The only long-lasting accomplishment of the Spaniards in the Philippines was the fact that, they had so effectively spread Catholicism throughout the areas in the archipelago which they governed. Throughout the period of colonial rule from its beginning to its end, their primary goal of converting the natives to Christianity had been on the whole successfully achieved. The only exception to this success was their inability to convert the large numbers of Muslims in Mindanao and the Sulu Islands and the indigenous people who believed in animism.

In the twenty-first century, the island archipelago is the only country in Asia where Catholicism is adhered to by a devoted large flock of Christians. Although, some Spaniards benefited from the other industry in the country, that is, the galleon trade, the spread of Christianity was always a main goal of the Catholic monarchs in Spain. They even envisioned the day when they could boldly spread Christianity to China, but of course, that plan was never attained by the Spaniards. They did spread Catholicism to Japan through the Christian missionaries who were also conducting trade activities in Nagasaki, but the Christians, both Europeans and Japanese converts were never really accepted and were persecuted. Many died in martyrdom crucified on crosses. Others were luckier and fled to Manila and Macau, where they were allowed to live peacefully and practice their Christian beliefs.

While the number of Spaniards remained small throughout the entire colonial period, the majority of those who stayed in the country

were members of the clergy. They settled throughout the provinces, establishing churches and converting the local inhabitants in those areas. By 1722, there were approximately 1,500 priests in the archipelago. Many friars were members of the various religious orders operating in the country and headquartered in Manila. These included the Augustinians, Franciscans, Jesuits and Dominicans. The Augustinians were the first to arrive in the Philippines with Miguel Lopez de Legazpi's expedition. The other orders soon followed with the Franciscans in 1577, the Jesuits in 1581, the Dominicans in 1587 and the Augustinian Recollects in 1606. They all established themselves in Manila before venturing into the provinces.

As the members of the clergy were allowed free passage on the galleons, they were the largest group of individuals who consistently arrived in the country throughout the colonial period. Moreover, as they tended to stay in the country for long periods of time, they were the only Spaniards who developed a bond to the country and its people. Once they arrived in the colony, the Manila government provided them with a yearly living allowance of 100 pesos and rice. The Manila government had the authority to designate to which areas in the country the clergy members were assigned, as well as approving the members of the clergy who were sent to the Philippines from Mexico. The province of Luzon, where Manila is located, was allocated to the religious activities of the Augustinians, Franciscans and the Dominicans. The Jesuits and the Recollects were assigned the Visayan Islands and Mindanao, where they tried their best to convert the Muslims to Christianity, but with little success.

As the members of the religious orders were involved in day-to-day interactions with the Filipinos and Chinese in the capital and in the provinces, they had formed closer bonds to the inhabitants of the archipelago. This close connection enabled the clergy to lobby the government for better reforms which could benefit the native population, as well as coming to their defense when they were abused by colonial officials. But, on the other hand, there were also members of the clergy who were responsible for abuses committed against the natives, as well as enriching themselves through bribery and investments in the galleon trade. However, to be fair, the majority of the clergy members were intent on helping their local parishioners and converting them to Catholicism.

The majority of the Spaniards, who were not members of the clergy, did not have the same sense of compassion and understanding for the natives. Instead of trying to elevate the lives of the native population through the expansion of agricultural projects or finding industries that the natives could participate in, they were only interested in their investments in galleon trade. They received the taxes and tributes

provided to them from the natives on the lands they owned through the encomienda system or enriching themselves through other methods. It is interesting to note that the charitable funds the “Obras Pias,” which was contributed to by the government in Manila and the Spanish residents of the city, was controlled by the ecclesiastical orders. Initially it was started to distribute charitable funds to the needy, but through the years it turned into a lending bank and provided loans and insurance to those individuals who shipped cargo on the galleon. The church officials had become money lenders.

There were conflicts between members of the clergy and the colonial government and this is best illustrated by the various incidents which occurred during the seventeenth and eighteenth centuries between the governors of the Philippines and the hierarchy of the church in Manila. Clearly, these incidents also indicated how the church and members of the religious orders had the capacity to control and manipulate the native population more so, than the colonial government. “The conflict between the church and state was never so bitter than during the governorship of Juan de Vargas Hurtado (1678-1684), when the high handed and violent Archbishop Felipe Pardo was head of the Philippine hierarchy. Banishment and excommunication were freely resorted to. Hurtado when no longer governor, was humiliated by being forced to stand daily in the streets of Manila with a rope around his neck and a candle in his hand, and like Salcedo finally died on an outgoing galleon, a prisoner of his clerical enemies. When Fernando Bustamante, a governor of the old school, attempted to revive the former prerogatives of his office, he aroused the bitter opposition of the clergy, who stirred up the populace in sedition against him. At last on October 11, 1719, a mob incited by friars broke into the palace and slaughtered the brave and defiant governor. ”[28]

During a meeting conducted by Bishop Salazar (1582-1586) of the Synod of Manila in the latter years of the sixteenth century, it was decided that natives of the country would be taught Christian beliefs in their own language rather than in Spanish or Latin. This was an important decision as it enabled the church to more efficiently spread Catholicism to all sectors of the country and increase the number of converts to Christianity.

Spain Thought of Giving Up the Philippines

As an administrative region under the jurisdiction of the viceroyalty of New Spain, the Spaniards never thought that the archipelago was commercially as promising as their colonies in the Americas. Even though the archipelago of seven thousand islands was located north of the Spice Islands, it was not a major producer of spices, which would have turned the country into a worthwhile area of exploitation by the

Spaniards. Moreover, unlike the other Spanish possessions in the Americas such as Peru and Mexico, which were able to produce abundant supplies of silver, gold and gemstones for export to Spain, the Philippines did not have large supplies of these resources.

Soon after Miguel Lopez de Legazpi's conquest of the Philippines, government officials in Spain began to argue over the archipelago which, as far as they were concerned, had little to offer to the Royal Treasury of the Spanish monarchy. They called for the abandonment of the country even though by the latter part of the sixteenth century the galleon trade was beginning to flourish with the returns of huge profits. In the early stages of the galleon trade run, there were as many as four vessels sailing from Manila to Acapulco each year, and they were filled to capacity with Oriental goods which were highly sought after by customers in the Americas.

However, by 1635, the galleon trade was only benefiting the individuals who invested in the venture. It was also the only enterprise in the Philippines which proved productive with little interest given to developing other forms of businesses in the island colony. As a result, Spanish officials in Spain felt that the colony was unproductive and discussions were then underway as to whether or not to abandon the archipelago. Clearly, the colony was unable to support its own government and had to depend on the yearly subsidy from the viceroyalty in Mexico to pay its expenses.

But the notion of abandoning the colony was not a new idea. When Philip II was in power, a proposal to abandon the Philippines was then under consideration and from time to time it became the topic of conversation in governmental circles in Spain. But the main impetus for the discussions may have been perpetrated by the disgruntled silk merchants in Seville and Cadiz who saw their profits dwindle because of the galleon trade. The merchants in Spain viewed the Chinese silk industry as a direct competitor to their own silk producing companies in the peninsula and their exports to the Americas. With the onset of the galleon trade, Spanish merchants began to see a drop in the demand for their products in the colonies.

The Chinese were producing a wide range of products which were sold at lower prices in the Americas. The Spanish merchants felt that they could not compete against the lower prices and the vast array of products emanating from the Orient which were pouring into Americas. Before the advent of the China trade, the Spaniards had a virtual monopoly on exports shipped to the Americas and their profits were enormous. This began to unravel with the onset of the galleon trade.

As the galleons brought many goods to the Americas, the Spaniards found that the Oriental products were becoming very popular and

customers enjoyed buying the unique and cleverly produced goods offered through the galleon trade. It became fashionable in the Americas to wear silks from China and jewels from the Orient, which were both skillfully handcrafted, but also enchanting to purchase. It also became fashionable to decorate one's home with the furnishings from the Orient with porcelains and bric-a-brac, which were produced in their millions in China and sold out quickly in the Americas.

Another problem the Spaniards were concerned about was the steady flow of silver into the pockets of the Chinese investors in the galleon trade. Again, this fear may have been fueled by the Seville-Cadiz merchants who were losing revenue due to the galleon trade. However, some government officials felt that the loss of so much silver to China, rather than returning to Spain, was a cause for concern. The profits that should have been sent to Spain were going to an Oriental country rather than returning to the homeland and adding to the economy of the country. Another point raised in Spain was the fact that the silver payments for exports to the Americas was going to the Chinese who were not Christians. But according to the government officials in Manila, the lack of silver returning to Spain was simply due to the fact that the production of silver in the Americas was reducing.

"It was this encroachment upon the Cadiz and Seville merchants that elicited complaints going so far as to suggest abandoning the colony because the Spaniards said that the silver of the Royal Crown was not meant to go into the hands of those who were non Christians or worshipped idols. The Manila merchants thought otherwise. The decrease of commerce in New Spain, they argued was due primarily to the considerable decrease in the mining of gold and silver. The cost of mining was greater and the profits less. By 1635 the once immensely profitable Potosi mine was reaching exhaustion. A second cause for commercial decline in New Spain was the decrease of more than six million in the Indian population. As a result a cessation in mine and farm service, partly due to the government legislation decreased production as well as the gross sum of tributes which in turn lessened consumption. It is understandable then that trade should have been diminished. A third and final cause was the little favor shown to the Indies trade. Burdens, imposts, duties were on the rise. The averia tax alone rose from two to six and then up to seven percent – it once skyrocketed to forty percent. To avoid these imposts, merchants in Mexico exported more to the Philippines than to Spain. They also put to use several other methods of avoiding taxes which if not licit were at least as profitable."[29]

The merchants in Seville and Cadiz had successfully petitioned the king for greater controls on the ships of the galleon trade and how much cargo they could bring into New Spain. Instead of the four or

more yearly galleons which sailed to Acapulco each year, this was reduced to one ship and the cargo it carried was restricted. As this meant that the investors received a reduction in their profits, it led to a flourishing clandestine trade, which became the norm on the galleons. Unregistered cargo was loaded onto the ships even though it was privately owned by Spaniards in Manila. In the end, the archipelago was retained by Spain as each monarch who came to power was determined to convert ever larger numbers of natives to Catholicism. This goal took precedence over the suggestions put forward by government officials in Spain or in Mexico to abandon the colony.

The silver payments, which the investors garnered from the galleon trade was mainly turned over to the merchants in China. At that time, during the years when the galleon trade was in operation from the latter part of the sixteenth century into the mid-seventeenth century, the Ming Dynasty (1368-1644) was experiencing a shortage of silver. As a result of this shortage, officials in the government monopolized the production of silks and porcelain by purchasing the country's output of these goods. This, in turn, served as a medium of exchange for silver through trade with the Spaniards. The trade in these goods proved immensely popular in the Americas, whilst providing China with the silver it needed to boost its silver reserves.

In China the preferred medium of exchange was silver. The country was not that interested in the exports arriving from New Spain and had no need for them. The Spanish silver which was turned over to the Chinese in payment for the goods sent on the galleons originally came from the silver mines in Mexico of Zacatecas, Pachuca and Guanajuato and Potosi in Alto Peru (now Bolivia). In any case, the Chinese were insatiably hungry for silver in coins of Spanish silver reales (pieces of eight) or as ingots. The silver bullion that they received was soon melted down and recast in shoe-shaped ingots called "sycees," which they used domestically as their own medium of exchange in China. Those Spanish coins, which remained in circulation in China, were incised with chop marks indicating their value in the Chinese currency known as "taels."

In Manila, the silver which was paid to the Chinese merchants of the Parian was used in an altogether different way. Apparently, they began buying land and agricultural estates, where they set up small market gardens as early as 1589. Due to their success as agriculturalists, the Spanish officials began demanding that the Chinese entrepreneurs provide their households with vegetables and poultry in exchange for their protection. In a letter dated from the year of 1629, and sent by Governor Juan Nino de Tabora (1626-1632) to the Spanish king, he wrote that the Chinese were highly productive

farmers. The Spaniards were so impressed by the capacity of the Chinese to grow crops on their lands that they began to provide the Chinese with cash advances in order to increase the yield of their agricultural products. The Chinese were very quickly able to pay back these loans to the Spaniards, while also producing bumper crops. In time, the religious orders of the Jesuits and the Augustinians also began hiring the Chinese to farm their lands. During these years, the Chinese competed with Filipinos who were traditionally the farmers of the country and were used to selling their produce and livestock in markets across the country and in Manila.

Chapter 4

The China Ship (Nao de China)

To the inhabitants of Mexico, the Manila galleon was known as the "Nao de China" or the China Ship. It was given that name as the majority of the goods carried on the vessel were primarily produced in China. In fact, the residents of Mexico jokingly said that the Philippine archipelago was a province of China, as they were aware that the majority of the investors in the galleon trade were the Chinese residents of Manila and mainland China. The Spaniards clearly recognized the important connection between the galleons and their dependence on China for the continuation and success of this transpacific trade.

As the galleon sailed annually to Acapulco, unless there was some sort of mishap, it had become as far as many Spaniards in New Spain were concerned the primary business of the Philippines. Along with the growth in the galleon trade, there was a corresponding increase in the number of Chinese who came to Manila to trade, as well as to settle down in the capital where they opened shops and offered a host of services to the Spanish and Filipino communities of the city. With only a few Spaniards actually involved in business of any sort, the Chinese came to dominate the economic activities of the city.

When payment was made for the goods shipped to Acapulco, it was usually turned over to the Chinese merchants in Manila and in China. A typical return on one ship's exports could garner as much as two million silver dollars profit for the investors. However, while vast sums of silver were returned to Manila each year in payment for the exported goods, very little of these payments were, in turn, used to improve the infrastructure of the country or the lives of the natives of the land. No other enterprise was so successfully established in the archipelago as the galleon trade venture. Consequently, during the Spanish colonial period from 1571 to 1898, only the galleon trade flourished until even that ended in 1815 when the Mexican War of Independence hindered the continuation of the commerce conducted through the galleon trade run. At that time, Spain had to turn to other types of businesses in order to grow the country economically. With the allowance of foreign firms into the country in the early nineteenth century, greater attention was paid to the agricultural products produced in the Philippines. The foreign companies were primarily concerned with these products and through their work and encouragement, Filipino farmers began producing greater quantities of agricultural products. The products were exported to countries around

the world.

The substantial silver payments paid to the Chinese investors, became a major predicament for the Spaniards in the viceroyalty of New Spain and in Manila. They were alarmed over the huge amounts of silver pouring into the pockets of the Chinese from their colonies in the Americas. This subject became a rehashed theme for discussion on both sides of the Pacific. The questions which arose in these conversations normally concerned why so many silver dollars were going to merchants in China rather than to their competitors in Spain and also, what did the Chinese do with all the silver they received?

Although the Spaniards in New Spain and in Manila were both interested in establishing closer ties with China, they were faced with a dilemma, which proved difficult to reconcile. They were basically fearful of the Chinese who they suspected had designs on the archipelago. They feared a Chinese attack and seizure of their possession in Asia. The fears were in some ways justifiable as they had been attacked at one point by a Chinese warlord, Limahong in 1574, and they had experienced a number of revolts launched against them by the Chinese community in Manila. Nevertheless, while they openly welcomed the goods supplied by China and other Asian countries in the region, they remained cautiously guarded and suspicious of the individuals with whom they conducted trade. Clearly, the people in New Spain and in Peru were eager to buy the popular goods brought to them by the galleons, but the officials of the Spanish government in Manila had their preconceived biases, as well as lingering doubts concerning the Chinese merchants with whom they conducted the daily business of commerce. The vast amounts of silver going to the Chinese investors helped fuel these lingering doubts.

On the other hand, the wealthy individuals who sought the goods from the Orient in both New Spain, Peru and in the other Spanish settlements of the Americas, gladly paid in silver for the silks, porcelains and other products, which were both utilitarian and unique, as well as being sold for lower prices than goods imported from Spain and other European countries. In many cases, the export goods were considered luxury items which only the wealthy could afford to purchase. As a result, it became fashionable amongst the societies of New Spain and Peru to wear clothing made of silk and other Oriental fabrics, as well as the jewels and ornaments of the East. The entrance of these luxuries into the Americas also influenced local designs with cheaper copies produced and offered to the rest of the population, which was unable to purchase the original products brought to New Spain from Manila. A whole industry flourished in Mexico and in Peru offering these knock-offs to the public.

The Beginning of the Dependence on the China Trade

After the conquest of the Philippines, the Spaniards soon realized that there was little of value to be had in the archipelago as far as wealth was concerned. Unlike their colonies in New Spain and in Peru, where silver and gold was plentiful, the Philippines had little to offer in that regard. The search for spices also proved uneventful as few spices were grown in the country except in Mindanao and in some areas of Luzon, otherwise, it was not as bountiful as the Spice Islands of the Moluccas.

When Miguel Lopez de Legazpi came into contact with the Chinese merchants in the Philippines and they, in turn, brought to the colony a number of Oriental goods as gifts for the Spaniards, it suddenly dawned on the Spaniards that there was a profit to be made through a trade in Oriental goods. They started sending ships to Canton in an attempt to set up a trade post there, but the Portuguese objected to their presence in the area. They urged the Chinese not to grant the Spaniards a facility from which they could trade. The Portuguese were successful in their campaign to convince the Chinese that the Spaniards were not to be trusted. The Chinese refused the Spaniards' request for a trade post, but they allowed them to sail to Canton and anchor there while they were involved in trade negotiations. The Spaniards found that they had to pay extremely high prices for the goods they purchased in Canton. They, in turn, sold these products in Mexico for equally high prices in order to make up the difference and gain a profit. As a result of the more expensive exports, which were entering New Spain from Manila, Philip II enacted a Royal Decree in 1593 prohibiting the Spaniards from traveling to Canton and Macau to purchase goods. After a five year period, the Philippine Governor Francisco Tello de Guzman (1595-1602), was given permission to renew trade activities with both Canton and Macau and other Asian countries in the region as the trade was considered an advantage for the new colony.

On behalf of the Spaniards in Manila, Juan Zamudio traveled to Canton where he once again petitioned the Chinese to allow them to set up a trade post and this time he was successful. The Spanish post or warehouse in Canton, was known as "El Pinal" (The Pine Tree), and it was located a short distance from Canton. As the Spanish trade activities grew, the Portuguese based in Macau began complaining to the Chinese and started a campaign to oust the Spaniards from El Pinal. They did everything they could to hamper the trade activities of the Spaniards and ultimately they turned the situation to their advantage. The Spaniards, in frustration of the difficulties created by the Portuguese, returned to Manila and abandoned El Pinal. Even though Philip II was by then the king of both Spain and Portugal, the Portuguese of Macau resented the presence of the Spaniards in Canton

as they were seen as competitors.

The Spaniards also had other motives for establishing a trade post in Canton. They had visions of converting the entire country of China to Christianity. Moreover, they erroneously presumed that conquering the country could be as easily accomplished as the seizure of Mexico from the Aztecs. The first steps towards realizing these objectives was the setting up of a trade post in Canton or having another base from which they would operate from in China. This would have enabled them to achieve their long-range goals for China. One of the ways the Spaniards envisioned accomplishing the Christianizing of China was through war. During the term of Governor Diego Gonzalo Ronquillo de Penalosa (1580-1583), he and Bishop Msgr. Domingo de Salazar discussed a plan to invade China and force the people there to accept conversion to Catholicism. The plan was known as the "China enterprise" or "la empresa de China." Of course, the plan was abandoned as other members of the religious community were opposed to it even though it had received the backing of Philip II.

"This was a project to send an armed expedition from the Philippines to China with the object of compelling the Chinese government to permit the entry of missionaries into China, and of providing the missionaries with an armed escort to ensure their safety while preaching Christianity to the Chinese. If the Chinese government resisted, war was to be declared and Spanish sovereignty imposed on the conquered territory. "[30]

Although the city of Manila was known as a prosperous Asian marketplace, in reality, only the galleon trade was its main source of revenue. When Le Gentil traveled to Manila in the eighteenth century, he wrote of his experiences in the city and acknowledged that there were no other major businesses located in the capital except for the galleon trade. He said that, "Strictly speaking there is no trade in Manila, and consequently no merchant marine. The result is that the city has never been rich. I realize that this is a sort of paradox, for Manila has always enjoyed a great reputation in Europe, but up to the present time we have had only a very imperfect idea in Europe of the power, the wealth, and the trade of that city, which a few travelers have exalted simply because they themselves had made money there, but without considering the intrinsic condition of affairs. "[31]

Le Gentil went on to say that the perceived notions in European circles that Manila was a fabulously wealthy city, even though that was not the case, may have originated with the exploits of Lord George Anson. As commander of the English ship the *Centurion*, Lord Anson was able to capture the galleon the *Nuestra Senora de la Covadonga*, which was returning to Manila from Acapulco in 1743. The vessel carried the silver subsidy for the colony of 250,000 silver

dollars, as well as an additional two million silver dollars in payment for the previous year's cargo shipment. The loss of the *Nuestra Senora de la Covadonga* was a devastating blow to the people of Manila, not to mention the investors who were counting on receiving these funds.

Then in 1762, during the British invasion of the Philippines by Brigadier General William Draper and Rear Admiral Samuel Cornish, revealed how inadequately the Spaniards were operating their military garrisons and fortifications in Manila and in Cavite. Although, the two British commanders were able to enrich themselves during the two-year seizure of Manila and Cavite, they realized that the city was not as wealthy as they had expected. The English perception about Manila, prior to the invasion of the capital, provides an insight into how Europeans viewed Spain's Asian outpost. One chronicler of the time wrote that, "The British public absurdly imagined that Manila, an ill governed settlement and oppressed by all the devices of Spanish colonial restrictions, must be a place of great wealth. They were seduced into a belief in this mischievous fantasy, by the dazzling and popular spectacle of the millions of dollars sent annually from America and by the dazzling captures of Cavendish and Anson and the imposing circumstances of seeing annually embarked in a single speculation the commercial adventures of a whole settlement."[32]

Of course, the mystique surrounding the country's supposed wealth was also propagated by the fact that Europeans were not permitted to conduct trade activities in the Philippines. The Spaniards only allowed the Chinese and other Asian vessels to enter Manila Bay and deliver goods for sale in the city and for the galleon trade. The country would not open its doors to world trade until the latter years of the eighteenth century, when the Spaniards realized that they needed to diversify and compete with the trade companies of the British and the Dutch in the region.

It was evident that the China trade basically developed accidentally and not as part of some pre-conceived commercial plan organized by the Spaniards in Mexico and in the Philippines. Unlike the Dutch in Indonesia and the Moluccas where their primary concern for settling in those areas was to dominate the region's lucrative spice trade, the Spaniards did not arrive in the Philippines with the notion of turning the Philippines into an amazing commercial venture. From as far back as the Magellan expedition, they were interested in finding their own spice sources in the Far East. Having a galleon trade based on Asian trade goods, was not a part of their initial intention for taking over the Philippines. In fact, they may have had designs on retaking the Moluccas away from the Portuguese. By having a base in the Philippines, it could have been used as a stepping stone back to the Spice Islands. There was always the matter of religious conversion of

the Chinese, which was apparently of great interest to the monarchs of Spain. Again, from the Philippines, the plan to spread Christianity to China may have been another reason for conquering the island archipelago.

When they returned to Manila, after the failure of El Pinal, the Chinese began arriving in Manila with trade goods, which were sold to them at cheaper prices than they had paid in Canton. As far as the Spaniards were concerned, the thought of having another trade post in China had completely vanished. As long as the Chinese ships arrived in Manila with their goods, they were satisfied with this arrangement and they conducted trade transactions through Chinese trade intermediaries located in Manila who acted on their behalf. The Spaniards purchased the goods for the galleon trade and started building their own vessels in Cavite for the transpacific venture. Along with the arrival of the Chinese trade vessels in Manila, it was the beginning of a large influx of Chinese immigrants who decided to stay and work in the Spanish capital.

"Ship owning merchants were not the only Chinese who came to the Philippines. Soon other Chinese – merchants and artisans – were migrating into the archipelago, attracted by the sophisticated economy newly established at Manila. The provisioning of the Spanish settlements with needed goods and services was an open field for Chinese enterprise. Not only merchants and artisans but fishermen and market gardeners settled in Manila and supplied the needs of the Spaniards. By 1603, barely thirty-two years after the founding of Manila as a Spanish settlement, the Chinese population there was estimated at 20,000."[33]

As the China trade increased, Manila's importance as a trade hub connecting the goods from China with the customers in New Spain, became apparent. Its central location with China and Japan to the North and Indo-China, Thailand and India to the west, as well as the Moluccas/Spice Islands to the South, meant that goods could be easily shipped to Manila from many trade countries in the region. Consequently, Manila was turned into a way station where the goods from the Orient were collected, stored and prepared for shipment to Mexico. As the city was also blessed with a magnificent bay, it proved to be one of the most outstanding harbors in Asia. At the mouth of the large and almost circular bay is the island of Corregidor, which divides the entrance into two channels. One channel is known as the "Boca Chica" (small mouth) and the other is "Boca Grande" (large mouth). The distance from the island of Corregidor to the shores of Manila is twenty-five miles.

According to Dr. Antonio de Morga, the galleon trade became such a money-maker that the Spaniards of Manila did not venture into any

other types of businesses. He also wrote of the growing concern amongst Spaniards regarding the silver payments going to China in payment of the goods carried on the galleons rather than to Spain. “This trade and commerce is so great and profitable, and easy to control – for it only lasts three months in the year, from the time of the arrival of the ships (from China) with their merchandise, until those vessels that go to Nueva Espana. The Spaniards do not apply themselves to, or engage in, any other industry. Consequently, there is no husbandry or field-labor worthy of consideration. Neither do the Spaniards work the gold mines. They do not engage in many other industries that they could turn to with great profit, if the Chinese trade should fail them. That trade has been very hurtful and prejudicial in this respect. Besides, there is the great harm and loss resulting from the immense amount of silver that passes annually by this way (of the trade), into the possession of infidels, which can never, by any way, return into the possession of the Spaniards.”[34]

Grau y Monfalcon said in 1637 that Filipinos were mainly farmers and fishermen who were involved in providing all sectors of the country with the food items they consumed. Working on the land as farmers was not an area of work that appealed to the Spaniards. In fact, they thought it was demeaning work as it required a great deal of manual labor, which they considered lowly work. As a result, the agriculture of the land remained in the control of the natives who provided Manila with the produce they grew on the land, as well as domesticated animals used for food. The Chinese, on the other hand, controlled the retail trade and provided the numerous skills, that they had perfected to the residents of the city. They were employed in ship and house construction, and worked as carpenters, apothecaries, restaurant owners, and numerous other trades. Consequently, for the Spaniards the only avenues open to them to amass wealth was to either invest in the galleon trade or to receive bribes for any services they provided to individuals who sought favors from them. In any case, the Spaniards thought it was their right to become wealthy after having undergone the tortuous journey across the Pacific to Manila. Having survived that voyage they felt entitled to enrich themselves in any way they saw fit.

Although the Spaniards had turned the galleon trade into their own private monopoly, very few of them had the wealth and resources with which to invest in the cargoes they carried. Legally, only the Spanish residents of Manila were allowed to participate in the galleon trade and they often acted on behalf of the Chinese investors serving as middle-men and receiving a commission for this service or a share of the profits. The Spaniards who invested in the trade included the governor, Spanish merchants of the “Consulados de Manila” (chamber

of commerce), and ordinary residents of the city. The Spanish and Chinese investors could earn as much as 300 percent profit on one galleon voyage. Other investors included the owners of retail shops, money lenders and individuals involved in other businesses. The desire to earn even higher profits through the galleon trade led to corruption, gambling and bankruptcy for some individuals who lost their profits just as soon as they received them. Others gambled away their profits in an attempt to become even wealthier and instead found they were destitute and at the mercy of individuals who offered charity.

Other than their involvement in the galleon trade run from Manila to Acapulco and vice versa, the Spaniards basically stayed away from operating any other type of businesses. There were a few Spaniards who came to Manila from Mexico expressly to open up a business, but they soon became discouraged and turned to other ways of earning a living. For example, when a Spanish bookbinder came to Manila and opened up a small shop to provide this service to the Spaniards, he hired a Chinese apprentice who learned everything he needed to know about bookbinding. He soon left his Spanish employer and opened up his own shop, which was in direct competition with the Spaniards' business. As the Chinese bookbinder offered good quality work at cheaper prices, customers soon preferred going to his shop rather than to the Spanish owned business which soon became bankrupt. As a result, few Spaniards were interested in opening up their own businesses in Manila, as they knew that they could not compete against the Chinese businessmen.

The Chinese of Manila

When Miguel Lopez de Legazpi conquered Manila, he welcomed the Chinese merchants who arrived in Manila Bay to trade with the natives. He encouraged the continuation of their trade activities in the capital. The Chinese began sending trade vessels to Manila on a regular basis. Their ships arrived with export goods consisting of a variety of textiles and fabrics including silks of every description and design, porcelains and Chinese commodities, textiles from India, Bengal taffetas, pearls, diamonds, topazes, ivory chests, intricate wood carvings, spices from the Moluccas, and from Japan there was amber, wheat, flour, swords, suits of armor, knives, saltpeter for gunpowder, home furnishings and many other items including foods from China such as fruits and poultry.

By this time, the Spaniards had realized that the Chinese were very familiar with the archipelago and had been trading for many centuries with the natives of the islands. Apparently, the Chinese had been traveling to the land of seven thousand islands on a number of trade missions arriving there on a yearly basis.

As the Chinese were fond of recording the lands and islands they had visited during their trade forays in Asia, they kept historical accounts of these journeys. Ancient Chinese documents such as the Ming Shih and the Sung Shih indicated that by the latter part of the tenth century, during the Tang Dynasty, trade contacts had been established between China and the Philippine islands of Luzon, the Visayas, Palawan and Mindanao. A small-scale trade was regularly conducted by merchants of Southern China and the Philippines during the Sung Dynasty (960-1279 AD). The research data shows that the Chinese were only interested in trading and not settling in the country during the years prior to the arrival of the Spaniards in the archipelago.

However, there are historical accounts which indicate that the natives of the Philippines, prior to Spanish rule, had been sending gift bearing emissaries to the royal court in China. Although some scholars have suggested that China, at that time period, did not try to influence the natives politically or culturally, this may not be quite accurate. If emissaries were sent to China from the Philippines, this clearly indicates that the natives of the archipelago may have been influenced by China's political might in the region. They may have felt compelled to send tributes to the Imperial Chinese court in a similar fashion to other tribute bearing countries in the area as a sign of respect and submissiveness.

Through archaeological evidence found in the Philippines, a number of artifacts including ceramics, gold, jars and other items indicate that the country had been exposed to the refinements of China. According to the American anthropologist Robert Fox, who spent many years in the Philippines studying and teaching courses in archaeology and anthropology, he said that before the arrival of the Spaniards in the Philippines, the natives of the country bought many ceramics from Chinese traders. "Chinese potteries were also highly prized by the Filipino during pre-Spanish times. Hundreds of years before Magellan an extensive trade developed between south China and the Philippines during which pottery was the principal item of exchange. The early appearance of Chinese pottery in the islands greatly influenced the development of local ceramics. Trade pottery from China, as well as from Annam and Siam, eventually became so intimately linked with the social and ritual life of the early Filipino that their possession by many Filipino groups became the principal measure of personal wealth and prestige."[35]

In addition to the ceramics the Spaniards found in the homes of the early Filipinos, they were also surprised to find that the Muslims who were ruling in the islands, as well as Manila, were elaborately adorned in silk robes and caps, and were bejeweled and carried gold encrusted

short knives similar to the Malay Kris. No doubt the fine silk fabrics, gold and gems they wore were probably imported from China and other Asian countries.

In historical documents the Chinese recorded that merchants from Champa (Vietnam and Cambodia), made trade journeys to the southern Philippines from 900 to 1200. It is interesting to note that the Chinese documents indicated that the Champa traders had established a trade post in the Sulu Islands before the colonization of the country. They left the Sulu Islands before the arrival of the Spaniards as they encountered difficulties in operating their trade post in that location.

The Chinese created ancient maps detailing the lands that they traveled to which showed the Philippine islands of Luzon, the Visayas and Mindanao. The dynasties of Ming (1368-1644) and Qing (1644-1911) recorded in their "Map for Observing the World and the Complete Map of All Nations," clearly depicts the Philippine islands. The archipelago of the Philippines was also mentioned in scholarly Chinese publications such as the "Zhu Fan Zhi" (Accounts of Various Barbarians) published in 1225, and written by a Chinese superintendent of trade who described the Philippine islands during that time.

To the ancient Chinese, who traveled to the Philippines as early as the tenth century, the country was known as "Ma-i." There is also an indication that the ancestors of Filipinos back in the tenth century also travelled to Canton, China from the Laguna de Bay area of Manila. The bay was referred to in ancient publications as "Ba-i." At that time, the Chinese were involved in exchanging the goods they brought to the archipelago such as silk fabrics, gold and silver, porcelains, pottery, jars, ceramics, colored glass, beads, ironware, metals of tin and lead, in return for Philippine products of pearls, various types of woods, cotton, yellow wax, tortoise shells, hemp and coral. Evidence of the ancient trade between the Chinese and the Filipinos has been found in the Philippines through archaeological excavations in the country where artifacts have been uncovered of pottery, ceramics and large Chinese jars. The artifacts indicated that an ancient trade between the two Asian countries had been conducted long before the arrival of the Spaniards in the archipelago.

After the death of Miguel Lopez de Legazpi, the Spanish government in Manila continued to encourage the Chinese to bring their trade goods to the capital. Legazpi's successor, Governor Guido de Lavezaris (1572-1575), wrote to the Spanish king in June 1573 explaining how the colonial government in Manila viewed the China trade stating, "The Chinese have come here on trading expeditions since our arrival, for we have always tried to treat them well. Therefore during the two

years that we have spent on this island (Luzon), they have come in greater numbers each year, and with more ships; and they come earlier than they used to, so that their trade is assured to us. Last year, Chinese vessels came to this city (Manila) to trade and (the crews) told us how the Portuguese (of Macau) had asked them not to trade with us, because we were robbers and came to steal and commit other depredations, so that these people wonder not a little if this is true. As the treatment accorded to the Chinese neutralizes these reports, more vessels came this year than last, and each year more will come."[36]

In 1573, Juan de la Isla informed the king that the colony needed more Spanish merchants as trade with China was increasing. He was hoping that greater numbers of Spanish merchants would be sent to the Philippines to take advantage of the trade opportunities there. The Chinese at the time were supplying the Spaniards with a huge quantity of goods and commodities such as wheat, barley flour, sugar, raisins, oranges and pears. The Chinese brought these goods to Manila from their ports in Canton and in Amoy, Fukien Province.

Archaeological Evidence of a Fourteenth Century Chinese Trade Ship

A fourteenth century Chinese trade ship was uncovered off the coast of South Korea in the Yellow Sea at a location known as Sinan-gun. The archaeologists estimated that the Sinan-gun vessel was shipwrecked approximately in 1310 AD. The remains of the shipwreck were found in 1975 by a Korean fisherman when he uncovered six ceramic containers in his fishing net. When celadon artifacts were found in the same area by another fisherman, the government officials were notified in January 1976. As a result of the discovery of the archaeological artifacts, Korea's Cultural Properties Preservation Bureau became involved in studying the shipwreck site and its artifacts. The celadon artifacts were examined and dated from the Yuan Dynasty period of 1260 to 1368 AD.

Although the wreckage was found in South Korea and not in Philippine waters, it is indicative of the sort of trade ship the Chinese were using during that time period and may be similar to the ships that came to the Philippines. The remains of the vessel provided archaeologists with as many as 12,000 artifacts including silver ingots and cast iron items, iron and bronze cooking pots, grindstones, porcelains, celadon's, earthenware and stoneware. Miraculously a wooden bucket and a bamboo basket were uncovered even though they had been under water for so many centuries. Other perishables also survived the sea currents and the wear and tear that most wreck sites undergo through time and these included spices such as peppercorns, which were probably purchased in the Moluccas and cinnamon bark, which was available in the Philippines. The

archaeologists also found the remains of peach pips, beans, seeds and fragrant woods, which may have been purchased in India. Additionally, 6,000 Chinese copper coins were found at the site. Personal items were also uncovered which may have belonged to the ship's crew such as bronze mirrors, lacquer ware bowls and a bronze scale inscribed with the name of Ch'ingyuanlu, which was an ancient port near modern day Ningpo. According to the divers who descended down to the wreck site to recover the artifacts, they estimated that what they had uncovered was only a small fraction of the cargo the ship carried.

Clearly, the ship was completely loaded with a great quantity of goods, which had been purchased in a number of places throughout Asia. It was exactly the sort of Chinese vessel that might have come to the Philippines to purchase products from the natives of the archipelago. The Chinese ship was thought to be on its way to Japan, but was probably caught up in a storm off Sinan-gun. The area where the wreck was found is known as a favorite spot for fishermen, but it is also quite dangerous as whirlpools are known to form there during storms. The Chinese ship may have met its end in this way. According to one of the fishermen who found several of the artifacts, he recalled forty years earlier that he saw Chinese trade vessels seeking shelter off of Sinan-gun during a storm at sea. Apparently, it was a place where ships sought shelter while waiting out a storm and this was probably the case for the vessel at the wreck site.

An underwater archaeological excavation of the site was not conducted as it had been looted by many fishermen in the area when the news of the shipwreck was released to the public. Instead, the archaeologists involved with the project collected the artifacts from the site as they found them even though they worked under difficult conditions including extremely cold water temperatures and zero visibility.

"A general consensus was reached that the Sinan-gun ship had been built in China. Her cargo of celadon and stoneware had been manufactured in the Chinese provinces of Chekiang, Kiangsi and Fukien. In one or more ports on the central coast of China, possibly Ch'uanchou in Fukien province or Ningpo at the mouth of the Yangtze River, she had picked up these ceramics and the other items in the cargo. These included trans-shipped incense, exotic woods and spices which most likely originated in Southeast Asia or the islands of the archipelago. She was bound for a port on the Japanese island of Kyushu, possibly Fukuoka, sailing via the open sea route across the entrance to the Yellow Sea. A date between AD 1308 and 1330 was settled upon for the ship's sinking."[37]

Another Chinese merchant ship was excavated at the harbor of

Ch'uanchou in Fukien Province, China. During the Sung Dynasty, Ch'uanchou was one of China's busiest port cities. The majority of the Chinese trade ships which arrived in the Philippines originated from Fukien Province, so this particular excavation provides further information on how the ships that traveled to the Philippines from China may have been constructed. It may also provide a clue as to the origins of the Sinan-gun vessel. The Ch'uanchou excavation dates from a half century earlier than the Sinan-gun ship, but a reconstruction of the ship indicates that it was a vessel with three masts, that is, a sturdy and larger main mast, a thinner, angled foremast and an even thinner mizzen mast. She had a stern rudder "and an internal skeleton utilizing both bulkheads and frames and a 'V' shaped bottom and true keel firmly attached to her up-sweeping stem post. "[38]

The ship's prow and stern curved upwards at both ends in a half-moon shape and appeared to have a deck with a cabin, a mid-ship area and a very large hold where massive amounts of cargo could be stowed. Instead of a wheel for steering the ship, it was controlled by a whip staff. The size of the vessel indicated that it was a wide vessel allowing for greater cargo space. The ship measured 105 feet 6 inches in length and had a breadth of 29 feet 8 inches and she was a 374 ton burden vessel, which made her equal in tonnage size to many of the earliest galleons operating out of Manila.

When the divers examined what remained of the ship itself, they discovered that when the vessel sank to the seabed it was resting on its starboard side. This would account for the fact that there were greater remains on the starboard side than on the port side. They could not determine if the shape of the bottom of the vessel formed a 'V' shape, which would have contributed to the way she sank listing to one side. They were also unable to locate the ends of the hull or the keel.

Before the appearance of the Portuguese in China during the sixteenth century, there was little information on how Oriental sea vessels were constructed. However, what is known about the Chinese vessels is that when they constructed the hulls of their ships, they did not add a keel, stem or stem post. The bottoms of their vessels were round-shaped with the ends of the vessel turned upwards and squared off instead of pointed. As a result of their shape, they were often unsuitable for ocean voyages. Compared to European vessels, the interior of the Chinese ships was also different as they had water-tight bulkheads instead of ribs. Unlike the shipbuilding traditions found in European countries, where design styles were easily copied and improved upon, the Chinese had developed their own unique shipbuilding techniques.

The Sinan-gun shipwreck and the Ch'uanchou excavation provided

a glimpse into the methods used in Chinese construction of their trade vessels, as well as the types of cargo they carried to Asian ports. These same types of trade goods have been found in Philippine excavations where Chinese artifacts have been uncovered. This is a clear indication that the Philippines and China were involved in a lengthy exchange of trade goods long before the arrival of the Spaniards in the country.

The Fifteenth Century Chinese Armada of Zheng He

Another illustration of China's commercial activities throughout the Asian region, long before the Spaniards set foot on Philippine soil, are the trade fleets organized by Admiral Zheng He during the Ming Dynasty. As a naval commander, Zheng He conducted seven trade missions throughout Asia and to faraway places such as India and Africa. His long range voyages serve as an indication of the scope and depth of China's trade throughout the centuries. By the time they encountered the Spaniards in the Philippines in 1565, during the time of Legazpi's expedition, they had been traveling to ports in the region for many centuries and were quite familiar with the natives they met through their trade missions in the region. They were equally aware of the types of merchandise and commodities they could purchase in each location.

According to ancient Chinese documents, Zheng He may have traveled to the Philippines on his first voyage in 1405. His itinerary at that time included the "Philippines, Java, Sumatra, Malaya, Ceylon and Calicut on the west coast of India," as mentioned by Chiao-min Hsieh, at one time a professor at the Catholic University in the Washington, D.C. There has been some controversy as to whether or not Zheng He actually sailed to the Philippines. But despite the questions of whether or not he actually arrived in the Philippines during his voyages, our purpose in mentioning him in this book has been to emphasize the fact that long before the arrival of the Spaniards in the Philippines, the Chinese may have been sailing in enormous vessels which were technologically more advanced than those employed by the Spanish fleets in the sixteenth century.

The personal history of Admiral Zheng He reads like a soap opera. Although he had been recognized in China as one of its greatest sea commanders, his family background can be traced to the Muslims of Central Asia and Kunyang. He was born to Muslim parents in 1371 in Jinxing, Yunnan Province. His birth name was not Zheng He, but Ma He. Both his great grandfather and father carried the title of Hajji, which meant that they had made the pilgrimage to Mecca. His father may have been working at the Mongol military headquarters in Yunnan, when a war broke out against them by the Chinese in 1382. They were defeated and in the process the eleven year old Zheng He

was captured and held prisoner. While in captivity, he was ritualistically castrated and trained to be an imperial eunuch serving at the court of Zhu Di, Prince of Yan (later Emperor Yongle). The Prince was the son of the Hongwu founder of the Ming Dynasty, Emperor Zhu Yuanzhang.

He remained for a period of twenty years at Zhu Di's court, where he became a key advisor to the prince and was instrumental in assisting him to become emperor in 1403. In commemoration for his role in the military campaign of 1425 at Zhenglunba, located near Beijing, his name was changed to "Zheng." During the reign of Emperor Hongxi in 1425, he was appointed the Defender of Nanjing. By 1430, he was given the command of a seventh expedition to the Western Ocean. He died during the return journey of this voyage from Hormuz in 1433.

During the Ming Dynasty from 1405 to 1433, seven naval expeditions were conducted under the auspices of Emperor Yongle. The objectives of the voyages were varied and included a desire to establish a Chinese presence in the countries bordering the Indian Ocean region, as well as an attempt to control trade in favor of China in those areas. Zheng He was appointed to command the fleet as its admiral. In his first fleet, he commanded 317 treasure ships with a crew of 28,000 men.

As the size of the ships in Zheng He's fleet were so massive, many scholars thought that the stories told about Zheng He's exploits were just myths about legendary treasure ships known as "Baochuans," but in 1962 these views were altered. In that year, workers were involved in digging a trench along the Yangtze River in Nanjing, when they uncovered a wooden steering post which measured 36 feet long. Given the size of the steering post, it was calculated that it belonged to a vessel measuring an astonishing 452 square feet. In Zheng He's fleet there were sixty-two of the gigantic ships, each with a carrying capacity of 3,000 tons.

The ships measured 400 feet in length and 170 feet across from starboard to port. An individual vessel had a 50,000 square foot deck and carried nine masts. The ships, which Zheng He commanded, were colossal if compared to the smaller vessels in the Christopher Columbus fleet of 1492 expedition to the Americas. To illustrate the immense size of just one of Zheng He's vessels, all three of Columbus's ships could have been placed, end to end, on the ship's main deck. A number of smaller boats escorted the larger ships and these included vessels with 8 masts and measuring 370 foot in length, as well as supply and military vessels which carried soldiers.

When Emperor Yongle died in 1424, the voyages were discontinued, but under Emperor Xuande (reigned from 1426 to 1435) one last

voyage was organized and again Zheng He was put in charge. When Zheng He met with the people of the lands his ships came to, he offered them a number of gifts such as porcelains, gold and silver, silks and received in return for his emperor, animals such as zebras, camels, giraffes and ostriches which would have amazed the courtiers at the imperial court.

Whether or not the ships in Zheng He's fleets were as enormous as recounted in history, the important point to remember is that while the Portuguese and Spaniards were sailing in the European waters in smaller vessels, they were no match for the highly sophisticated ships produced in China for oceanic travel during the fifteenth century. Zheng He's excursions are also indicative of the sea journeys undertaken by the Chinese during that period of time around Asia, which brought them into contact with the natives of the Philippines prior to Spanish colonial rule.

Chinese Trade Ships Arrive at Manila

By the 1580s, the number of Chinese trade vessels arriving in the Philippines generally ranged from twenty to sixty ships each year. They sailed to the Philippines from their ports in Canton and Amoy, as well as from the Portuguese port of Macau. Their sailing schedules depended upon the weather conditions then prevalent in the region, as well as any signs of lurking pirates in the area. Pirates always posed a problem for the Chinese vessels, and this was of great concern to the captains of the ships as they knew that, in particular, Japanese pirates were usually sailing near the island of Luzon in the Philippines. Other pirate vessels were operating along the coasts of Cochin-China and Taiwan. When Chinese ships were attacked by the Portuguese and the Dutch, they usually seized the cargoes of the vessels they captured. The sailing schedule of the vessels was also disrupted by domestic unrest in China. On the whole, however, the Chinese junks or sampans arrived regularly in Manila. The amount of cargo the Chinese vessels carried to Manila was also regulated according to whether or not the Chinese merchants thought that money was scarce in the city.

The Chinese vessels usually arrived in Manila from March to June, before the onset of the southwest monsoon rainy season, but the timetable was not completely fixed. They normally sailed in convoys of up to ten vessels at a time and arrived in Manila after a journey of about two weeks. Their voyages to the archipelago also depended upon the amount of profit they hoped to derive from trade in Manila. If there were any difficulties in Manila such as political problems or revolts by the Chinese residents living there, this also affected their sailing schedules.

When the ships sailed to Manila Bay and arrived off the coast of Mariveles, which is located on the northern perimeter of the bay, a

Spanish soldier boarded one of the Chinese vessels. Through the use of fire signals from the highest point of an extinct volcano located in Mariveles, the authorities in Manila were alerted of the arrival of the Chinese sampans and junks. The ships sailed to Manila where the cargo was inspected by customs officials. Unfortunately, the Chinese merchants were often harassed by the officials who sought bribes from them. As a result of these corrupt practices, the Spanish customs officials resorted to removing the masts of the Chinese vessels and replacing them with masts of substandard quality. This made it impossible for the Chinese to return home unless the bribes were paid and the original masts restored to their vessels. After the cargo was appraised for its value, the Chinese had to pay a customs import duty of three percent, as well as an anchorage fee. When the payments had been turned over to the officials, the cargo was unloaded from the sampans and junks and transferred to government warehouses. Most of the cargo was destined for the Manila galleon, while the rest was generally sold by merchants in the Parian (Chinese neighborhood) for local buyers.

In 1583, Archbishop Salazar noticed that fewer Chinese vessels were arriving in Manila, and this was due to the fact that the Chinese merchants were continuously harassed by the Spanish customs officials. News of this difficulty probably made its way to China and the merchants there thought it best not to visit the capital that particular year. As a result of this situation, Chinese products were sold in the Parian for higher prices than usual as new stock was unavailable. The Spanish government passed laws governing various issues concerning the Chinese in Manila and those who arrived there with goods for sale. They made an attempt to find better methods of handling the Chinese. In a law passed by the king, he stated that the Chinese should be treated with greater consideration.

Prior to dealing with the Spanish customs officials and the galleon trade, the Chinese who arrived in the country, were engaged in bartering goods with the natives of the Philippines. They brought their products to the islands and, in turn, received local commodities and other products from the natives. The exchange of goods was always conducted aboard their vessels as the natives brought their goods to them on small boats. A young Italian diplomat Antonio Pigafetta, who was an assistant to Ferdinand Magellan, wrote of the Chinese vessels they encountered while in the archipelago in 1521. He indicated that the Chinese had been coming to the Philippines at least six to eight times a year to conduct trade with the natives. This explained why he found Chinese objects in the homes of the natives of Cebu.

Throughout the centuries, trade between the Chinese and the natives of the land continued to be successfully conducted with both

parties equally pleased with the exchange of goods. During the period in Philippine history when Luzon was under Muslim occupation, this trade was still in existence. The sultans and rajahs of the Philippines traveled to China from the eleventh to the fifteenth centuries. There are records of the tribute missions to China conducted by the Muslims of the Philippines. In one Ming Dynasty account known as the "Ming Annals," there was an indication that the Sultan of Sulu arrived in China with his family and courtiers to pay tribute to the emperor.

From as far back as the year of 1280, Chinese merchants arrived in the islands to trade with the natives buying cotton, wax, pearls, tortoise shells and hemp cloth in exchange for Chinese silks, porcelain, colored glass, beads, iron ware and other products. After Magellan's sojourn in the islands, another Spanish explorer Alvaro de Saavedra noted that while he was in the country he heard stories of Chinese trade with the natives. Friar Andres de Urdaneta, the chief pilot for Legazpi's expedition, was also aware of the trade between Filipinos and Chinese merchants.

Over the years, and through the work of archaeologists in the Philippines, evidence of the early trade ties between the Philippines and China was uncovered. On many archaeological sites, Chinese porcelains, jars and other artifacts have been found attesting to the early relationship between China and the Philippines throughout the centuries. But the relationship of the Chinese with the earliest Filipinos was not just a commercial exchange of goods, but it was also an exchange of ideas with the Chinese bringing to the country information and experiences, as well as skills that the natives were unfamiliar with in the islands.

As Manila grew, so did the Chinese population of the city. Even though the galleon trade became a monopoly controlled by the Spaniards in Manila, it was the Chinese whose products were mainly in the ship's hold and who controlled the economic activities of the city. They provided the city's occupants with all the necessities of life.

Each year the Chinese convoys carried approximately six thousand crew members and twelve thousand traders. Also on board the vessels there were approximately two to three hundred individuals who intended to immigrate to the Philippines. The larger vessels carried anywhere from two hundred to four hundred men although attempts were made by officials in China to limit the number of men who traveled on the junks and sampans in order to control immigration to the Philippines. In one case, three Chinese junks carried as many as six hundred individuals when they arrived at Manila in 1572, while another fifty Asian ships sailed into Manila Bay with as many as 15,000 individuals. By 1603, there were already 18,000 Chinese residents living in Manila with another 4,000 who arrived on the trade

junks from China.

Many Chinese journeyed to the Philippines with the intention of remaining there. They had heard that there were work opportunities in Manila, which were not available to them in the unstable areas of southern China. They had also heard stories that in the Spanish colony, they could become rich. If they managed to enter Manila, they settled in the Parian or at the "Alcaiceria" (a large building containing many shops which were operated by Chinese merchants). By 1637, the area outside of Manila and across the Pasig River known as Binondo was already a thriving community filled with many converted Christian Chinese and Mestizos. They owned the many shops operating in the area and offered their customers their products using a credit system, whereby if the customer could not pay for the goods, he could pay at a later date when he had the funds.

One of the ocean going Chinese vessels was described by the British adventurer William Dampier who was in the Philippines during the seventeenth century. In his books on his travels to the Philippines, and in particular Mindanao where he stayed for a time, he described one Chinese junk saying, "She was built with a square flat head as well as stern, only the head or forepart was not so broad as the stern. On her deck she had little thatch houses like hovels, covered with Palmetto leaves and raised about three foot high, for the seamen to creep into. She had a pretty large cabin, wherein there was an altar and a lamp burning. I did but just look in, and saw not the idol. The hold was divided in many small partitions, all of them made so tight, that if a leak should spring up in any one of them, it could go no farther, and so could do but little damage, but only to the goods in the bottom of the room where the leak springs up. Each of these rooms belongs to one or two merchants, or more; and every man freights his goods in his own room; and probably lodges there, if he is on board himself. The junks have only two masts, a main mast and a foremast. The foremast has a square yard and a square sail, but the main mast has a sail narrow aloft, like a sloops sail, and in fair weather they use a top sail, which is to hale down on the deck in foul weather, yard and all; for they do not go up to furl it. The main mast in the biggest junks seems to me as big as any third rate man of war's mast in England, and yet not pieced as ours, but made of one grown tree; and in all my travels I never saw any single tree masts so high in the body, and so long, and yet so well tapered, as I have seen in the Chinese junks."[39]

When the Chinese and other Asian vessels arrived at Manila, they carried crews composed of not just sailors from China, but also men from other countries. According to one chronicler, Bartholome de Letona, he said that in Manila one could find people from all over Asia and also from the Middle East. These individuals traveled to Manila

aboard their own vessels to conduct trade with the Spaniards and the Chinese, and they could easily be spotted on the city's streets.

"The commerce of this city (Manila) is extensive, rich and unusually profitable; for it is carried on by all these Chinese and their ships, with those of all the (other Southeast Asian) islands and of Tunquin (Tongking), Cochin-China, Camboja (Cambodia), and Siam (Thailand), four separate kingdoms, which lie opposite these islands on the continent of Great China and of the gulfs and the numberless kingdoms of Eastern India, Persia, Bengala (Bengal), and Ceilan (Ceylon), when there are no wars; and of the empire and kingdoms of Xapon (Japan). The diversity of the peoples, therefore, who are seen in Manila and its environs is the greatest in the world; for these include men from all kingdoms and nations, Espana, Francia, Inglaterra, Italia, Flanders, Almania, Dinamarca, Suecia, Polonia, Moscobia; people from all the Indies, both eastern and western; and Turks, Greeks, Persians, Tartars, Chinos, Japanese, Africans and other Asiatics. And hardly is there in the four quarters of the world a kingdom, province or nation which has not representative here on account of the voyages that are made hither from all directions – east, west, north, and south."[40]

The success of the galleon trade attracted sailors and merchants from throughout Asia who realized that they could profit from this enterprise. They normally remained aboard their ships as goods were transferred by smaller boats to warehouses or in the case of the Chinese many remained in Manila. The Chinese who left the ships to settle in Manila often took up trades in the city and set up their own small businesses after a time. They became the merchants and the artisans who provided a host of services to customers including the Spaniards and the Filipinos. Initially, they were only allowed to operate in Manila and particularly in their own community of the Parian, but as their numbers grew over the years, they were allowed to carry on their business in the other provinces of the country if they had converted to Christianity. They had to obtain licenses from the mayors of the areas where they wanted to open up businesses and also from the local clergy. Once given permission to settle in these areas they could set up their own home and a shop where they sold goods to the local community and to the traders in Manila for the galleons. Many of the Chinese who settled in Manila were employed by Chinese residents who were already settled in the city and were operating their own businesses there for longer periods of time. If they were skilled workers such as carpenters and blacksmiths, they were hired by the Spaniards to work at the Cavite shipyard.

The Spanish government imposed a number of regulations on the galleon trade in the sixteenth and seventeenth centuries which limited the volume of the cargo carried on the galleons. However, they were

not successful in limiting the cargo which was taken aboard the vessels clandestinely or the fact that the Chinese continued to reap the major portion of the profits received through the galleon trade. At times, the trade relationship between the Spaniards and the Chinese became unpleasant. The Spaniards accused the Chinese of conducting "trampas" or cheating them in their transactions. The Chinese, on the other hand, peevishly accused the Spaniards of late payments for the goods shipped on the galleons.

Manila's Chinese Neighborhood - The Parian

The Spaniards were always suspicious of the Chinese who were living in their midst and suspected that they might one day seize the country away from their control. They were considered a threat and perhaps they had a legitimate concern, as from time to time, the Chinese of the city had launched rebellions against them. When they fought the Spaniards it was usually for some perceived notion of abuse such as the fact that the Chinese had to pay a higher yearly residence tax, as well as other fees due to their ability to profitably conduct business and increase their incomes through hard work. They sometimes also rebelled against the officials of the colonial government, which arbitrarily recruited both Chinese and Filipino men for military campaigns or to work on various construction projects including building the galleons.

However, on the whole, the majority of the Chinese residents of Manila were only interested in earning a living through trade or by practicing a skill they had perfected such as carpentry, house construction or working on the galleons as blacksmiths. If the Spaniards had allowed them to get on with their lives, they would have had a much better relationship with the Chinese, but their fears and biases sometimes led to ugly encounters including the revolts launched against them. However, as the Spaniards felt intimidated by the growing Chinese population of Manila, they decided to gather all of the Chinese who were living outside of the city walls, and segregate them into their own neighborhood which was known as the "Parian." From atop the city walls, armed soldiers monitored the activities of the Chinese in their community. They were free to roam around the entire city during the day, but in the evening hours they were expected to return to the Parian.

The order to move the Chinese to the Parian was enacted by Governor Gonzalo Ronquillo de Penaloza (1580-1583). The designated location for the new neighborhood was a swampy, inhospitable area located just outside of the north eastern perimeter of the walled city. The area was saturated by daily tidal floods and beleaguered by swarms of insects, but the Spaniards had nevertheless decided that this was where the Chinese were to live. It was also located just

opposite to one of the city's gates, which from then onwards was known as the "Parian Gate." The name Parian was derived from the Chinese word for "organization," which is "palien."

The industrious Chinese began to immediately reclaim the land by draining out the water and building up the soil for the construction of their neighborhood. After the ground was dry enough, they began to turn it into a proper community with streets and blocks where they could have their homes and shops. Although the early Parian suffered a number of fires, as the first structures were constructed of bamboo and nipa thatch, the Parian was rebuilt and improved several times. The Chinese began constructing their houses and shops of less flammable materials and building them up higher above the ground in case of flooding. Within the Parian, the Chinese added a pond, where water flowed into it from the nearby Pasig River. They also added a small island in the center of the pond, which provided a bit of beauty to their neighborhood. The canal, which connected the pond to the river, was also used for the arrival and unloading of smaller boats with merchandise to and from the Parian.

The Chinese turned the Parian into the economic hub of the city. The interior of Manila may have seemed like a sea of tranquility, but in comparison, the Parian was a place of excitement as buyers shopped and sellers enticed consumers to buy their merchandise. There were as many as one hundred Chinese shops operating in the Parian. The Chinese merchants located there were involved in the selling of silk and other fabrics, as well as bakers, confectioners, restaurateurs, tailors, shoemakers, artists, silversmiths, candle makers, apothecaries, bookbinders and sellers of household goods and trinkets. The shops were frequented by both Spaniards and Filipinos, and they contained vast quantities of goods sold for reasonable prices.

A special building was erected to serve as the silk market. It was known as the Alcaiceria. In this very architecturally interesting structure there were many shops devoted to the trade in silk. The building was an octagonal shaped structure with the interior composed of a series of two storied shops and housing for the Chinese on the second floor. Within the structure there was a massive open aired courtyard and gates leading into the building.

Even though the majority of the exports destined for the galleon trade came directly from China, many items were produced by the Chinese in the Parian. They operated numerous shops and businesses offering everything from fabrics to restaurants which were frequented by Chinese, Filipinos and Spaniards. Additional, the Chinese offered the community a number of skills including carpentry, printing, construction of buildings, apothecaries, artists, furniture makers and a host of other trades not provided by the natives or the Spaniards. They

also acted as middle-men for sellers in China who shipped their goods to Manila for the galleons.

In 1590, Bishop Domingo de Salazar of Manila provided an insightful description of the Parian. He wrote that, “There are, in this Parian, workmen of all trades and handicrafts of a nation, and many of them in each occupation. They make much prettier articles than are made in Espana, and sometimes so cheap that I am ashamed to mention it. This Parian is provided with doctors and apothecaries, who post in their shops placards printed in their own language announcing what they have to sell. There are also many eating houses where the Sangleys (Chinese) and the natives take their meals; and I have been told that these are frequented even by Spaniards. The handicrafts pursued by Spaniards have all died out because people buy their clothes and shoes from the Sangleys, who are very good craftsmen in Spanish fashion and make everything at very low cost. There are many gardeners among the Sangleys, who, in places which seemed totally unproductive, are raising many good vegetables of the kinds that grow in Espana and Mexico. They keep the market here as well supplied as that of Madrid or Salamanca. They make chairs, bridles, and stirrups of so good a quality and so cheaply that some merchants wish to load a cargo of these articles for Mexico. Many bakers make bread with the wheat and fine flour which they bring from China and sell it in the marketplace and along the streets. They are so accommodating that when one has no money to pay for the bread; they give him credit and mark it on a tally. The Sangleys sell meat of animals raised in this country and also many fowls and eggs. They are so intent upon making a livelihood that even split wood is sold in the Parian. The city finds most of its sustenance in the fish which these Sangleys sell. They catch so much of it every day that the surplus is left in the streets.”[41]

In 1628, the Spaniards allowed the Christian Chinese who were married to Christian Filipinas to spread to the area known today as Binondo and Tondo where they continued to live and have businesses. After converting to Christianity, the Chinese were exempted from paying taxes to the government for a period of ten years. At the end of that time period, they paid a lower tax rate than the Filipinos. This opened a Pandora’s Box of problems for the community, as the Filipinos would have resented the disparity in how they were treated compared to the Chinese Christians. The Chinese Christians were allowed to settle in other provinces of the country where they opened up shops and were involved in farming and setting up market gardens. When Chinese Christians were allowed by the Spanish government to move to the provinces, other Parians were established in Cebu, Iloilo, Davao and in the Sulu Islands as Chinese migrated to these regions

where they established businesses or became farmers.

Chinese Population and Daily Lifestyles in Manila

By the end of the sixteenth century there were as many as four hundred shops in the Parian with as many as eight thousand Chinese directly involved in the retail trade. Even though the city's economy was booming, due to the activities of the industrious Chinese, the Spaniards were always troubled by their growing numbers in the Parian. As the Chinese were viewed with an air of suspicion and distrust, this led to a sense of uneasiness in the Spanish community. The Spaniards realized that their retention of the colony was at risk especially as their numbers were fewer than the Chinese community just outside of the city's walls. The thought of losing the colony to the Chinese was always of paramount concern to them.

The population figures, during the years of Spanish colonization, are inconclusive and difficult to verify. In one source, it states that there were 3,000 Spaniards living in the Philippines in 1591 with 2,000 of this figure living in Manila. At the same time, there were about 3,000 to 4,000 Chinese living in the Parian and another 2,000 transients who arrived with the Chinese trade ships, while additional Chinese were living in the provinces of Luzon. But five years later, Dr. Antonio de Morga had apparently expelled 12,000 Chinese from Manila and stated that as many as 12,000 more Chinese still remained in the Parian. Then in 1621, another source, Schurz states that there were in Manila, "over 10,000 licensed Chinese in Manila and 5,000 unlicensed." In I636, Grau y Monfalcon wrote to the king and mentioned that there were over 30,000 Chinese in Manila. By 1749, another source states that there were 40,000 Chinese in the city. At this time, there was a larger number of Chinese in the colony due to a great famine occurring in China and, in turn, causing many to flee to other countries such as the Philippines. Although the population figures for the Chinese community are in some cases over or under exaggerated, what is clear is that they outnumbered the Spaniards and that factor alone would have been a cause of great anxiety and apprehension amongst the Europeans who feared being overrun by the Asians.

But despite the difficulties experienced between the Europeans and the Asians in Manila, the Chinese managed to maintain the cultural beliefs and customs they had known in China. This was evident in the manner in which they lived their lives in Manila. They seemed reluctant to accept the European way of life as depicted by the Spaniards of the Philippines. Even when many Chinese married native women and converted to Christianity, in order to remain in the colony, they continued to dress in Chinese fashions and led an Oriental lifestyle.

The men, who initially arrived in the Philippines aboard the trade ships from China, usually traveled unaccompanied by women. They may have left their wives and children behind in China or they may have been mostly bachelors, but what is evident is that it was mostly men who arrived in Manila on the Chinese junks to work on the ships or to immigrate and open up businesses in Manila.

In their clothing, the Chinese were to remain detached from the influence of the European fashions worn by the Spaniards or the cooler garments worn by the natives. They clung to the clothing styles which were evident during the sixteenth and seventeenth centuries in China. The typical well-to-do Chinese wore a long colored or black silk robe with wide sleeves, silk pants and hose made of felt. On his feet he wore thick soled shoes made of materials such as embroidered silk. Atop his head was horsehair cap often denoting his position in Chinese society and produced according to varying fashions of the day. The less influential Chinese, who was not a laborer, often wore a long blue garment with wide sleeves similar to the robes worn by the well to do individuals. For a funeral, they wore white robes and pants. The less influential sailors and laborers wore simple white, loose shirts and knee pants with straw sandals and perhaps a straw hat.

A document found in the Archives of the Indias in Seville, describes the Chinese of Manila in 1576. It states that, “The Sangleys are big bodied, brawny, scant bearded, broad of forehead and not bad, nor unpleasant looking. They have long hair gathered on mid-head topped with a red bonnet woven with black threads; it is high and very richly embroidered. The rest of the suit is long with wide sleeves and they look almost like priests except that the dress is of vari-colored red silk fabric. They have an alphabet and print although the characters are not so good. They write in columns from top to bottom and the columns start from right to left. Their books are about history, mythology, written and illustrated; they make use of palmistry and physiognomy, astrology, music and all the arts and even books on mechanics. They are shrewd merchants. They have artillery and gunpowder. ”[42]

They enjoyed the types of entertainment they were familiar with in China including gambling. William Dampier, the seventeenth century English adventurer who lived in Mindanao for a period of time, described the Chinese he met saying, “The Chinese are very great gamesters, and they will never be tired with it, playing night and day, till they have lost all their estates; then it is usual with them to hang themselves. This was frequently done by the Chinese factors at Manila, as I was told by Spaniards living there. The Spaniards themselves are much addicted to gaming and very expert at it; but the Chinese are too subtle for them, being in general a very cunning people.”[43]

As the majority of the Chinese who immigrated to Manila were men from the Canton dock area, these individuals were often used to a rougher way of life. Most were not familiar with the scholarly teachings of Confucius, but were simple folk interested in finding employment even if it meant going to another country. However, they were willing to work hard and given the opportunity to labor or learn a skill, they were soon able to adapt to their new homes in Manila and succeed in business. Many became employees of Chinese who were already established in Manila with their own shops and businesses.

The Dominicans became the primary religious order which was devoted to the Chinese Christians in the Parian and ministering to their needs. They learned to speak and write in Chinese in order to provide the converts with church services in their own language and to establish a rapport with the members of their flock.

The Dominican Bishop Salazar wrote of his impressions of the Philippines and of the people living there. Regarding the Chinese conversions to Christianity, he said, “When I came, all the Sangleys were almost forgotten, and relegated to a corner. No thought was taken for their conversion, because no one knew their language or undertook to learn it on account of its great difficulty and because the religious who lived here were too busy with the natives of these islands. Although the Augustinian religious had charge of the Sangleys of Tondo, they did not minister to or instruct them in their own language, but in that of the natives of this land. Thus, the Sangley Christians living here, were Christians only in name, knowing no more of Christianity than if they had never accepted it. This city being built on a narrow site with the sea on one side and a river on the other was all occupied and there seemed to be no place where the Dominicans could settle, but there was soon discovered a site of which no one had thought until then and which is now the best in the city. The site adjoins the Parian of the Sangleys and that gave the religious of that order occasion to hold intercourse with them and to become mutually attached to one another for whenever the Sangleys come and go from the Parian, they pass by the church of Santo Domingo, and being a very inquisitive people they often stop and watch what is taking place there. ”[44]

The attitude of the Spaniards towards the Chinese was influenced by their having to retain a connection to them where trade was concerned. However, they were also eager to continue their plans of converting large numbers of Asians to Christianity. They had the support of the king in this endeavor to increase the number of converts they encountered in the Philippines and elsewhere in Asia. There was always the lingering hope that the Philippines would enable the Spaniards to enter China and convert the population of that

country to Catholicism. That was one of the long-range goals of the Spaniards in Spain and in the Philippines.

However, with regard to the Chinese the Spaniards encountered in Manila, they had mixed feelings about them. In many ways, they did not understand the Chinese way of life and judged them as being immoral and participating in many vices. They were afraid that the Chinese would influence the native population and lead them astray rather than following Christian teachings. The Spaniards also felt that many Chinese were converting not out of piety, but out of a need to remain in the colony in order to continue operating their businesses. Again, they thought that these false conversions would morally harm the natives they had converted to Catholicism and those they hoped to convert. Laws and regulations were passed by the Spanish government to regulate how the Chinese were treated by the colonial Spaniards. In the Recopilacion de los Leyes de los Reynos de las Indias, thirteen laws specifically concerned the treatment of the Chinese in the Philippines.

"Benevolent provisions were made to protect the rights of the Chinese, just as the famous New Laws were issued earlier to secure good treatment of the Indians in the Spanish American colonies. The governor was constituted the special protector of the Chinese until an official was created in 1629 for that particular purpose. The Chinese community was under the immediate jurisdiction of its own head man or governor, who was required to be a Christian and who could appoint the necessary retinue of officials and assistants for his own people. He had the power to settle disputes among the Chinese though appeals from his decisions might go to the Alcalde Mayor of Tondo or of the Parian or higher to the Royal Audiencia. The Dominican friars always exerted their great influence in favor of just treatment and maintained a hospital for the treatment of Chinese. Spanish officials were often arbitrary in their treatment of the Chinese."[45]

Throughout the seventeenth and eighteenth centuries, Spaniards questioned the sincerity of the Chinese converts to Christianity. As Dr. Antonio de Morga described the situation at that time, "Their having become Christians is not through the desire for salvation, but for the temporal conveniences that they have there." By the end of the seventeenth century in 1695, the Royal Audiencia stated that, "Although they are not very good Christians, they make very good Catholics and loyal vassals of your Majesty." [46]

Doubts continued to linger regarding the Chinese converts in the eighteenth century when Governor General Simon de Anda y Salazar (1770-1776) said, "Even the padres confess that the Chinese accept conversions only to be allowed to marry in Manila and to carry on business there." Anda stated that during the British invasion of the

Philippines in 1762, the Chinese had become aligned to the Englishmen in a bid to oust the Spaniards from the country. He felt that this betrayal was in essence an indication of their callous conversions to Christianity and disloyalty to the Spanish regime.

The Occupations of the Chinese in the Parian

There were a number of Chinese who were master builders in Manila. They brought their architectural skills with them when they immigrated to the Philippines. Once there, the Spaniards put them to good use and kept them busy constructing their homes, churches, monasteries, hospitals, military facilities and many other structures. The buildings they constructed were made of a combination of hewn stone, oyster shells and coral. They were experts in stone masonry and produced their own bricks and tiles for the structures they designed and constructed at a lower cost than the Spaniards were experienced with in Spain. The buildings were also quickly erected in less than one year, which amazed the Spaniards in how efficiently and well managed the projects were handled by the Chinese. By using the skills of the Chinese construction masters, the look of the city changed from one that had wooden houses with thatched roofs, to sturdier structures made of the materials employed by the Chinese builders.

Bishop Salazar noted the ingenuity of the Chinese architects in Manila and said, “Here, through the diligence and industry of the Sangleys, we are able to build fine houses of hewn stone at a low cost and in so short a time that in one year a man has been able to complete a house, all ready for habitation.” They were also instrumental in the construction of the galleons serving as carpenters and blacksmiths. Moreover, they expertly packed and crated the many bundles, crates and packages that were shipped on the trade ships, as well as serving as crew members.

The Chinese also had the innate ability to reproduce an exact copy any item they came across. This was the case when they had to reproduce items such as silver plates, platters, pitchers, cups, jewelry and a multitude of other items. They were able to produce quite a collection of religious items which were used by the churches in the Philippines and in New Spain. These included altar pieces, candle sticks and religious images. In one instance, they were also commissioned to supply a man with a new nose. Apparently, as a result of a severe illness, a Spaniard lost his nose through the aftereffects of the ailment. He asked a Chinese trader to supply him with a wooden replacement, which was completed to his satisfaction. The Chinese trader was so handsomely paid that he thought it had been such an easy transaction and proved profitable. He returned to Manila the following year with a crateful of wooden noses thinking that there was a market in New Spain for wooden noses.

There were a number of Chinese retail shops in the Parian, as well as individuals engaged in offering a number of services. These included, "Sellers of blankets, silk, peddlers, dealers in ceramics, weavers, sweet makers, foundry men, net makers, sugar vendors, hat makers and sword makers, sellers of vegetables, shoemakers, fishermen, fishermen with boats, silversmiths, wax chandeliers without shops, wax chandeliers with shops, booksellers, dealers in rattan, ironsmiths, winemakers, noodle makers, sellers of coconuts, rice dealers, chicken dealers, chicken dealers with boats, tobacco dealers, umbrella makers, box producers, locksmiths, western tailors, fishermen with nets, petate (the Mexican word for grindstone) makers, water jar makers, boatmen, pharmacists, barbers, Chinese tailors, brokers, brazier men, dyers, carpenters, boatmen who traveled to Pampanga, boat men who traveled to Cebu, boat men who traveled to Iloilo, guards, tea dealers, rope makers, water dealers, rice cleaners, Chinese cooks, porters and oil dealers."[47]

Even if the Spaniards had shown any inclination to become shopkeepers in Manila, they were reluctant to enter into the retail trade. Perhaps this was due to the fact that they realized they could not compete with the Chinese ingenuity to learn new skills and turn their new found knowledge into a profitable business.

How the Chinese Were Governed in Manila

According to the chronicler Joaquin Martinez de Zuniga who was in Manila in the early years of the nineteenth century, he wrote that the Chinese of the Parian were allowed a system of self-government even though they were still under Spanish control. The Spaniards selected members from the Chinese community to govern the Parian, and this included a "captain" who acted as the head of area. The captain governed the area with his own lieutenants and constables. The captain purchased the post for four thousand pesos from government officials and reported to them on a regular basis. This was probably the best solution developed by the Spaniards in dealing with the Chinese as they were unable to speak Chinese. The captain selected was usually able to speak Spanish and acted as an intermediary between the Spanish government and the Chinese community.

As the head of the Chinese community, the captain collected a tribute (tax) payment of six pesos from each Chinese resident of the Parian. The total collected turned out to be a sizable fortune considering that there were often as many as 20,000 to 30,000 Chinese in the Parian. The collected funds were deposited in the colonial government's Royal Treasury, but it is thought that the captain skimmed off a certain amount for himself and his lieutenants who collected the tribute payments. Understandably, for the residents of the Parian, the position of captain was the most sought after

appointment they could aspire to attaining.

Although the captain did not receive a salary for his work in governing the Parian, he had the opportunity to provide petitioners with favors and, in turn, to receive gifts in appreciation for his assistance. Even though the Spaniards kept a list of the Chinese tribute payers, many of the individuals living in that community were not registered in their records. Some of the unregistered Chinese had been hiding in the community illegally or were using fake permits to remain in the Parian. This meant that the captain collected far more taxes than were actually turned over to the Royal Treasury. He may have been collecting approximately an extra 4,000 to 6,000 pesos, but the actual figures may have been ten times that amount.

The Spaniards provided the Chinese with loans, which had to be paid with interest at the end of the month. In lieu of the interest on the loans, the Spaniards asked the Chinese to provide them with daily food provisions for their homes. In one case, a Spaniard provided a Chinese with the funds to start up his own business in Manila. In return, the Chinese entrepreneur provided the Spaniard and his household with daily cuts of beef. Two other borrowers provided their Spanish lenders with chickens and another with daily deliveries of vegetables.

Conflicts Between the Chinese and the Spaniards

Throughout the years of colonial rule, the Spaniards had to contend with a number of conflicts involving the Chinese of Manila. Whenever the Chinese revolted against the Spanish regime, the government's response to the problem was to expel large numbers of Chinese from the country. But as the Spaniards had become so dependent on the Chinese for all their daily needs, they soon realized that they were mistaken in expelling the very people who kept the wheels of the economy turning each day.

Another problem the colony would have experienced, if the Chinese were expelled from the country, was the fact that without them the galleon trade would have ended. News of the conflicts would have surely reached mainland China, and this would have meant that fewer junks sailed to Manila. The Chinese community was so completely involved in the galleon trade – in the construction of the vessels, manning them and also providing the cargo and the provisions they required - that they had become a vital element to their continued existence. The galleon trade would have ended overnight without their cooperation, assistance and merchandise. Perhaps the Spaniards realized that their conflicts with the Chinese, and the expulsion solution, posed a threat to the trade because soon after one of these conflicts, they relented and allowed the Chinese to once again return to Manila. This process was repeated time after time with revolt,

followed by expulsion, and ending with the re-emergence of the Chinese community. It is a wonder that after so many conflicts between the Chinese and the Spaniards, and the endless expulsion and deaths of thousands of Chinese, that any of them were willing to return to Manila, but in the end it was a matter of economics. The Chinese knew that they could prosper in Manila, and given that fact, there were thousands more who were willing to take their chances in the Spanish colony.

The first revolt against the Spaniards occurred in 1603 and this incident reduced the Chinese population of the city by half. Nevertheless, the Chinese junks with their crews, merchants and immigrants continued arriving in the colony in ever growing numbers. Other revolts took place in 1605 and 1639, and still they sailed to the capital where they found opportunities which were unavailable to them in their home country. Dr. Antonio de Morga wrote of the consequences Manila faced when the Chinese were expelled from the colony and that even the Filipinos of the city had become dependent on the Chinese for all their needs. He wrote that, "After the end of the war (revolt in 1603), the needs of the city began, because not having Sangleys who worked at the trades, and brought in all the provisions, there was no food, nor any shoes to wear, not even at excessive prices. The native Indians are very far from exercising these trades, and have even forgotten much of farming, and the raising of fowls, cattle, and cotton, and the weaving of cloth. In addition to this, people thought that Chinese vessels would not come to the islands with food and merchandise, on account of the late revolution."[48]

The Spaniards in Manila also remembered that the colony was attacked in 1574 by the Chinese pirate Lin Tao Lien (Limahong). During the early years of Spanish conquest of Manila, the newly established colony was under the command of Governor Guido de Lavezaris. He had replaced the deceased Governor Miguel Lopez de Legazpi. The city of Manila was attacked by Lin Tao Lien who arrived in Manila Bay with a fleet of 70 large junks. They were able to land onto the shore and began attacking the Spaniards and the Filipinos who were living there. At that time, the city was only defended by the flimsy wooden fort which had been erected by the Muslims when they ruled in Manila. The Spaniard, Martin de Goiti, Master of the Camp and other Spanish soldiers were overwhelmed by the Chinese as they fought to defend themselves. Fortunately for them, another Spaniard, Juan de Salcedo, Legazpi's grandson, arrived in Manila Bay aboard a vessel that was returning to Manila from the northern city of Vigan. With the additional Spanish soldiers aiding Martin de Goiti's forces, they were able to repel the Chinese attack. The Chinese returned to their ships and sailed to the coast of Pangasinan, in western Luzon.

They were followed by the Spaniards who were able to again engage them in battle and burned their vessels.

In 1593, the murder of Governor Gomez Perez Dasmarinas (1590-1593), by Chinese rowers on his galley added to the tension between the Chinese and Spanish communities of Manila. The governor was traveling from Manila to the Visayan Islands where he was to command a fleet of ships with the objective of sailing to the Moluccas to conquer the islands located there. The governor's galley anchored overnight at the island of Maricaban, when during the night a mutiny erupted with the Chinese rowers attacking the Spaniards on the vessel and killing the governor. After the Chinese threw the governor's body overboard, they sailed to the coast of Indo-China. Two of the eighty Spaniards on the ship were able to survive the attack.

In Manila, the news of the governor's murder created an atmosphere of deep concern amongst the Spaniards. They were angered by the incident and worried that the Chinese in the city might use it as a motive for revolting against them. In the interim, the governor's son, Luis Dasmarinas, was appointed provisional governor by the Royal Audiencia until New Spain could send out a replacement for his father. Determined to find the criminals who committed the murder, Luis Dasmarinas sent one of his military officers, Fernando de Castro, to Canton and other cities along the China coast in an attempt to find the murderers and return them to Manila. Although Fernando de Castro was unable to find the Chinese who committed the crime, suspects were arrested in Malacca and sent to Manila where they were beheaded.

However, the relationship between the Spaniards and the Chinese continued to mutually co-exist even if at times the situation between them was tense and ambiguous. The Spaniards certainly had their reservations where the Chinese were concerned and remained cautious. On the other hand, the Chinese merchants in particular, were interested in maintaining harmonious relationships with the residents of Manila, as they pursued their primary focus which was trade. "Not surprisingly, within a few years after the Spanish conquest, the relations between the Chinese and the Spaniards fell into a pattern of distrust and latent hostility. Basic to this pattern was a prevailing condition of economic interdependence coupled with seemingly irreconcilable cultural differences. While considered a cultural minority in the Spanish plan, the Chinese were still, compared with the Spaniards, a numerical majority and hence potentially dangerous. "[49]

Even though the Chinese and Spaniards were involved in conflicts at times, they still arrived in droves in Manila. If the Spaniards were

reluctant to remain in the Philippines on a permanent basis, the Chinese had no qualms about living in the colony for the rest of their lives. They married native women and converted to Christianity in order to remain in the colony. As Reed mentioned in his study of the capital city, “The galleon exchange thus acted with powerful magnetic force upon the Chinese, who not only carried a bewildering variety of goods to Manila for reshipment to Acapulco or consumption within the city, but also created through their individual and collective presence a large and changing collection of transient traders and mariners. From this community also emerged many peddlers, craftsmen, laborers, and market gardeners who made the Spanish colonial capital their permanent residence.” [50]

Chapter 5

The Port of Cavite and the Royal Naval Shipyard

Although sea vessels were constructed in various locations throughout the Philippines, the majority of the galleons were built at the Cavite shipyard. In fact, it could be accurately said that during the entire period of Spanish occupation of the archipelago, the naval port of Cavite the "Astillero de Rivera," was the largest and best equipped shipyard in the country. The other shipbuilding and repair sites located in various areas of the archipelago were much smaller in comparison, but from time to time, historical records indicated that galleons were constructed at the shipyards of Cebu, Albay, Bicol, Bagatao Island (Sorsogon), Marinduque, Mindoro, Masbate, Camarines and Pangasinan. In many cases, the fact that shipyards other than Cavite were selected to construct a galleon was due mainly to the availability and easier accessibility of lumber in those locations.

In 1619, the experienced mariner and naval officer, Captain Sebastian de Pineda, wrote that during the term of office of Governor Juan de Silva from 1609 to 1616, a number of vessels were constructed in shipyards across the country. These included the following: the *San Juan Bautista* and the almiranta *San Marcos* were constructed at the island of Marinduque; in the province of Camarines and Dalupaes, the *Nuestra Senora de Guadalupe* and the *Angel de la Guardia* were both built; at Bagatan the *San Felipe* and the *Santiago* were constructed; in Mindoro the *San Juan Bautista* was built; in Masbate the flagship the *Salbador* was constructed, and in the port of Cavite the *Espiritu Santo* and the *San Miguel* were constructed, as well as six galleys.

A large proportion of the galleons were constructed in the Philippines simply because it was less expensive than building them in Mexico or elsewhere in the Americas. In another archival document dating from December 1577, the governor of the Philippines informed the viceroy in Mexico City, Martin Enriquez, that he had constructed two galleons in the country of 400 tons each. The governor suggested that by constructing the galleons in the Philippines, rather than in Mexico or in other settlements in the Americas, the royal treasury's expense would be less. As a consequence of the suggestion, the viceroy asked his accountant to study the matter and provide him with an itemized list of the expenses involved in the construction of a galleon. After studying the situation the accountant stated that the cost of building one galleon was approximately 78,000 pesos. The viceroy noted that the figure did not include the salaries for the seamen

manning the vessel nor any other ancillary construction costs, which were incurred during the construction process in Manila. However, in the long run, he realized that it was less expensive building the vessels in the Philippines rather than in Mexico, and this may have been one of the reasons why so many galleons were constructed in the archipelago. In any case, he no doubt realized that the expense involved in the payment of salaries to construction workers in Mexico would have been increasingly higher than in the Philippines. The majority of the jobs at the Cavite shipyard, for example, were filled by Filipino and Chinese employees and they were paid only a minimal salary.

Obviously, another reason why it was cheaper to construct the vessels in the Philippines was the availability of lumber, which was plentiful in the archipelago, and less so in the arid areas of the west coast of Mexico. According to Spanish shipwrights in Spain, they needed at least 2,000 trees to construct one galleon. This would have also been the case in the Philippines and a steady and vast supply of tropical hardwoods would have been required by the shipwrights at Cavite for the construction of each vessel. Finding a continuous source of lumber, determined in many cases, where the ships were built in Spain and the same was true in the Philippines. But having a large enough labor pool was also a major requirement the shipwrights had to take into account. The access to manpower may have led to the construction of galleons in other parts of the Philippines, rather than just depending on the Cavite shipyard, and its surrounding areas for manpower.

However, the selection of Cavite as the capital's main seaport was due to the fact that the capital city of Manila, although located on Manila Bay, did not have the depth of sea water needed to support the anchorage of large vessels such as the galleons. But as it was the commercial hub of the country, where many of the Chinese merchants who were involved in the galleon trade lived and ran their businesses, it made sense to maintain Cavite as the city's main seaport. As a result, Cavite became the logical place to also construct the galleons and a variety of other sea vessels. It also served as the port for the loading and unloading of departing and arriving galleons. Even though it was not in possession of a dry dock, the shipyard was able to careen and repair sea vessels along the beach.

By the earlier years of the seventeenth century, the Spanish government in Manila diverted one third of its yearly administrative budget to the construction and outfitting of galleons and galleys. By 1630, the Cavite shipyard was one of the largest areas of employment for Spaniards and natives alike with almost one thousand individuals working there when a galleon was under construction.

According to the military commander Fernando Valdes Tamon, in a report he sent to Philip V, when he served as governor of the Philippines from 1729 to 1739, the main purpose of the Cavite shipyard was the construction and outfitting of the galleons for the Manila to Acapulco trade run. He also indicated that the cost involved in the construction and manning of the vessels was paid for by the government's royal funds. "The main task of the Rivera de Cavite shipyard is to build and prepare His Majesty's vessels, and particularly those dispatched each year to New Spain, with the permission of this trade and for the Real Situado (subsidy); the cost is financed by the royal fund, which also pays for all the relief supplies for the navy and army officers, both senior and junior, the crews and the provisions required." [51]

He went on to describe the activities conducted at the Rivera de Cavite saying, "It is the habitual anchorage for both his majesty's ships and for private vessels, as well as for the tenders of the Oriental people who come to trade here each year. Its population consists of the garrison of its castle and other posts. The naval seamen serving on the ships on the carrera shipping route and other crown account vessels, as well as the craftsmen and other officials employed at the shipyard outfitting works, who represent the largest number (among so many), three chief petty officers, and other boat and coast officials. The overall political, military and financial governor is a castellan and lord high justice, who depends directly on the Captain General." [52]

The port city of Cavite was located on a narrow peninsula that jutted out from the mainland into Manila Bay. It measured 5,100 feet long and 1,200 feet wide and was approximately 20 miles away from Manila. Governor Tamon provided a detailed description of Cavite in his report, as well as a map drawn up of the shipyard which indicated the various facilities to be found there. In order to protect the western perimeter of Manila Bay and the capital, the Spaniards fortified Cavite in the seventeenth century. A defensive curtained wall was constructed the length of Cavite's western side. The wall began at the entrance into the port city which was known as "La Estanzuela," and continued to the far end of the peninsula to the "Punta de Rivera." From atop the wall, artillery emplacements were stationed to protect the port's western perimeter and the city of Manila from enemy ships entering Manila Bay. Along the eastern shore of Cavite, which faced Manila, there was no protective wall as it was deemed less likely to be attacked by enemy vessels.

On the other side of the Cavite entranceway was the Filipino village of San Roque. Facing the village was a fortified gateway with a moat and two towers from which cannons and armed soldiers were positioned to defend the port area from a landside attack. The

Filipinos living in the village catered to the needs of the city and the shipyard and provided a source of labor.

Two thirds of the city of Cavite consisted of government offices, churches and mission buildings. Members of the religious orders of San Juan de Dios, San Domingo, La Compania de Jesus, Los Recoletos and La Soledad, were based in Cavite. Also within this area were the homes of the Spaniards involved in the administration of the city or employed by the military fortification, Fort San Felipe, as well as the Rivera de Cavite shipyard. The other third of the city was devoted to the construction of the galleons and galleys. In this section of Cavite, the shipyard, Fort San Felipe, cargo warehouses, workshops, supply and equipment storage buildings and a foundry were located. The galleons and galleys were constructed along the shoreline where a number of docks had been set up.

The port was operated by a manager or superintendant known as the "castellan." He was not selected for his familiarity with naval matters, but for his connections to officials who were already working in the government. The job of a shipyard manager was given to a Spaniard who was usually a relative or protégé of the governor and had little or no naval experience. This was also a position which could be purchased from the governor for a sum of money or some other sort of gift.

A number of buildings were located in the Punta de la Rivera shipyard, which were involved in one way or the other in the construction, provisioning and manning of the vessels. There were also a number of warehouses located inside the shipyard compound. One warehouse in particular was considered the shipyard's main storage facility and it was known as the "Almagazenes" (Almacenes). In this structure there were five storage areas for abaca (hemp for ropes/cables), brea (pitch/tar/sacking/canvas), aceite (oil), iron, and other equipment, as well as the warehouse manager's office. Additional warehouses and offices dotted the shipyard compound where employees who were involved in the processing of the cargoes worked. Beyond this was the seafront where a pier was used to load and unload cargo onto the vessels. A short distance away was the site where weaponry was gathered and loaded onto the ships. One pier served as the arrival and departing area for galleys. A large water tank referred to by the Spaniards as "El Tanque de Agua," provided a reserve supply of water for use at the shipyard and for the galleons and galleys.

A special pier, "El Puente Para la Carena de Dichas Embarcaciones" (the bridge where ships were careened for embarkation), was the work area for the cleaning and repair of the vessels. Across an open space, between the beach and the wall on the western portion of

Cavite, was a building known as the “Real Herreria” or the royal ironworks. This structure was actually where the blacksmiths and foundry were located. Coal and iron were delivered to the foundry from a delivery site located along the beach. The offices of the various officials involved in the construction of the ships were also located in this area. Another warehouse nearby contained the timber used for the masts.

The shipyard was a separated area from the rest of Cavite. It was enclosed by a number of gates which were connected on either side of Fort San Felipe. The fort was located almost at the mid-point of Cavite. In the portion of Cavite that served as the residential area of the city, there were several houses in which the captain of the shipyard and other officers lived.

One of the difficulties the castellan had to deal with was the loss of materials which were stolen from the shipyard by workers who were employed there. Governor Fernando Valdes Tamon wrote that the pilfering of supplies was an ongoing problem. “What is known today as Rivera de Cavite is that it stretches from its Point to the San Felipe Fort, which is headed off by two gateways at the flank angles of the bastions, the gunpowder store on the south part and the scrap metal store on the north. These thoroughfares had been open but were closed to put an end to the frequent pilfering of nails and other items during caulking or shipbuilding. As a result a pathway was provided for the people working on the Rivera, to form the flat battery mentioned previously, thereby protecting the main face of the fort from the constant pounding of the waves. ”[53]

In addition to the construction of galleons at Cavite, the shipyard was also involved in building other sea vessels such as galleys. There were buildings at the Rivera de Cavite that were used solely for the construction of these smaller vessels and where the offices of the individuals involved in this process could be found. Governor Valdes Tamon described some of the services provided by the employees located there. It is also interesting to note that he mentions that the construction and operation of the shipyard facilities was paid for by the government. Furthermore, it should be pointed out that many of the tools used in the construction of the sea vessels were made at the port. These included axes, saws, braces, mallets and adzes.

“The Rivera has a shipyard where his majesty’s galleons, coast guard vessels, galleys and galiots are built and outfitted. It also had a bridge used for caulking these vessels and other private boats, as well as the royal forge, where all kinds and sizes of tools for shipbuilding are made, and the offices of the different craftsmen who work there daily. It has several storehouses for masts and yards, anchors, cables, rigging and other cordage, cannons, gun carriages and generally all

the arms supplies and nautical aids and the living quarters of its principal officers. All has been set up by this government so that, in a short time and in an orderly fashion, everything that is required can be built, outfitted and prepared. "[54]

When the ship's construction was completed the cargo was loaded onto the vessel. It was transferred to the ship by Chinese sampans and other small boats from the warehouses in Manila. The shipyard was a bustling place especially when a ship was being prepared for embarkation and its journey across the Pacific to Acapulco. Many merchants were on hand including Chinese and Spaniards who were shipping cargo on the vessel. A number of Filipino and Chinese laborers were busily working, preparing the vessel for the journey, as well as serving as crew members on the galleon. Seamen prepared the ship's sails and rigging, while Spanish officers supervised the loading of the cargo. The cargo had been meticulously packaged by Chinese packers who were exceptionally adept at cramming hundreds of fabrics into bundles or carefully placing a multitude of small ceramic wares and porcelain items into larger Chinese jars. The cargo was then loaded into the hold by Filipino and Chinese laborers. Every single bundle, crate, jar and package was given its designated spot in the hold to ensure the vessel remained balanced.

Shipyard Workers

Governor Fernando Valdes Tamon provided a list of the individuals who were employed at the shipyard and their annual wages. Every worker received an annual rice allotment except for the chaplain who presumably received his ration from the religious order he represented. It is interesting to note that the Rivera de Cavite had a fine complement of employees involved in the operation and management of the shipyard, as well as in the construction of the galleons and galleys. The Rivera de Cavite apparently was well organized by the early decades of the eighteenth century.

The shipyard would have had a purveyor (proveedor) who was involved in overseeing the construction of the sea vessels built there, as well as managing the provisioning of the ships. Another important individual at the shipyard was the paymaster (pagador), who was in charge of paying monthly salaries to the workers. He also distributed payments for the construction of the vessel itself, that is, for any supplies and equipment provided for the project by suppliers. The ship's inspectors were known as "veedores" who acted on behalf of the king in Spain. They were involved in making periodic payments to a contracted shipwright who was building a galleon for the king.

Positions and Annual Salaries of the Officers of the Rivera de

Cavite Naval Dockyard 1736
Captain of the Point (Shipyard) - Salary 300 pesos
Naval Second Lieutenant - Salary 120 pesos
Sergeant of the Navy - Salary 90 pesos
Four Squadron Corporals and a Petty Officer - Salaries 180 pesos each
Two First Officers – Salary 240 pesos each
Two Second Officers – Salaries 192 pesos each
A Record Taker and Overseer of the Royal Harbor Works - Salaries 300 pesos each
A Storehouse Warrant Officer - Salary 120 pesos
A Surgeon - Salary 96 pesos
A Galley Skipper - Salary 120 pesos
A Galley Chaplain - Salary 180 pesos
A Master of the Royal Forges - Salary 300 pesos
A Master of the Rigging Works - Salary 120 pesos
A Master of the Cask Making Works - Salary 240 pesos
Artillery Pandayes Master (artillery master) – Salary 120 pesos
Another Master (same as above) - Salary 30 pesos
A Senior Master Carpenter - Salary 360 pesos
A Deputy Carpenter - Salary 300 pesos
A Works Foreman - Salary 300 pesos

Additional Employees of the Rivera de Cavite Naval Dockyard Who Were Employed to Work on the Galleons

There were a number of other workers employed at the Rivera de Cavite shipyard who were mainly skilled craftsmen and laborers and directly involved in the construction of the galleons. They each received a yearly salary and a rice allotment. Governor Fernando Valdes Tamon listed their salaries, but when he quoted a larger figure, this was an overall total for a particular group of employees. Each person listed in the category mentioned would have received a share of the allocated pesos depending upon the job he performed.

226 Marines – Sixteen of the marines were also ship's masters. They were paid various salaries depending on their jobs. The salaries came out of a sum of 5,201 pesos which was allocated to the group. They also each received a yearly rice ration. Those individuals who were qualified ship master's were able to serve on the vessel in several capacities including as its master or pilot.

166 Cabin Boys (Pages) - All of the cabin boys were paid the same wage and received a yearly rice ration. Their average salary was 2,490 pesos for the entire group.

Galley Slaves – The Spaniards owned slaves. They may have been individuals who were captured through various battles in the Philippines and were usually Muslims or other Asians. They received a rice allowance, lantern oil, as well as 300 pesos annually for fish, salt

and vinegar. Of interest is the fact that as a group they were also paid a salary out of 580 pesos allocated to them yearly.

8 Rigging Producers – These individuals were involved in the production of all the ropes used in the ship's rigging. They received an annual wage of 198 pesos and a yearly rice ration.

152 Scuttlers - The entire group of scuttlers (worked with the carpenters) were provided with a rice ration and a yearly salary of 3,930 pesos.

16 Cask Producers (Coopers) – They received a yearly rice ration and annual salary of 351 pesos.

15 Sailmakers – These individuals were involved in sewing the canvas strips of cotton into sails. They received various wages with an average salary of 594 pesos annually and rice rations.

305 Pandayes (involved with artillery) - Of these individuals 15 were involved with artillery and received various wages and rice rations. Annual salary for the group was about 372 pesos.

33 Clerks – The clerks, two of which were involved with artillery, received an annual salary of 495 pesos and rice rations.

135 Blacksmiths – The blacksmiths worked at the shipyard's foundry and earned various wages of on average 4,644 pesos yearly along with rice rations.

31 Storehouse Managers – These individuals worked in the storehouses where provisions, weaponry, ropes, sails, cargo and other necessities used by the shipyard were kept. They received varying wages with an average annual salary of 709 pesos and rice rations.

16 Carpenters – When the shipyard was at its busiest there would be as many as 1,000 carpenters at work there. But when Governor Fernando Valdes Tamon visited the Cavite shipyard in 1736, he found that there were only sixteen carpenters on duty. These may have been the master carpenters as the wages they received were considerably higher. They were paid various salaries but on average received an annual payment of 1,451 pesos plus rice rations

4 Foremen – The foremen supervised the various stages of work conducted at the shipyard. They received an average salary of 300 pesos annually. The brace sawyers and shipyard carpenters, both Filipino and Chinese, were paid a daily wage and did not receive a rice ration. Presumably they were not regular employees of the shipyard, but only hired when needed. They probably also lived in their homes located outside of the shipyard in the nearby towns and villages. Their total annual salary was 14,922 pesos.

The caulkers and the Filipinos, who delivered the rigging and raft supplies to Cavite, received various wages depending on the jobs they held at the shipyard. They all received rice rations. There were also skilled day workers who arrived at the shipyard working there from

morning until night and returning to their homes.

Master Shipwright and Carpenters

Throughout the period of Spanish colonization, when shipbuilding was conducted at Cavite and in other ports, it was accomplished under the supervision of Spanish master shipwrights. The majority of the shipwrights in the Philippines came from the Basque region of Spain. When they arrived in Manila, they brought with them years of practical shipbuilding experience they had garnered in Spain, Havana and in Mexico. The shipwrights followed shipbuilding methods then employed in the construction of the vessels during the sixteenth and seventeenth centuries. As a result, the galleons built in the archipelago were similar to those built in the Havana and in Spain in design and construction.

In Spain, the first shipwrights designed vessels by copying the ships they saw in port cities. As time passed, by the 1550s, shipwrights began planning out on paper the types of ships they were going to build and followed these plans as the vessels were constructed. By the mid seventeenth century, shipwrights began building models of the vessels they planned to construct.

The Spanish master shipwright, Diego de Arevalo, serves as an example of the highly skilled individuals who were involved in the construction of galleons in the Philippines. During his stay in the country, he was employed as a master shipwright at the Bagatao Island shipyard in Sorsogon. He was contracted by Governor Diego Salcedo (1662-1668), to oversee the design and construction of a galleon. When his work was completed in 1666, the galleon he had constructed was christened the *Nuestra Senora del Buen Socorro*.

As far as the governor was concerned, Arevalo was not only a qualified shipwright, he was also an experienced mariner. As a result of his high regard for Arevalo, he appointed him commander of the ship. At the time, the *Nuestra Senora del Buen Soccoro* was said to have been the largest galleon ever constructed in the Philippines. Another interesting note was the fact that when Arevalo designed the vessel, he installed two massive water tanks inside the ship. These were probably placed in the hold and acted as additional ballast. Apparently, the water tanks were so huge that it was said at the time that, they held enough water for a voyage to and from Acapulco. The galleon sailed to Acapulco in 1666 and arrived there safe and sound.

Clearly, there were master carpenters also employed at the Cavite shipyard. Moreover, as in Havana, Cartagena and Mexico, the master carpenters who came to the Philippines, brought with them years of practical experiences they had acquired in the peninsula and in the Americas. They were familiar with the designs and methods used in the construction of the vessels, and continued these time-honored

traditions in the Philippines.

Chinese and Filipinos Employed at the Shipyard

While the economic life of Manila was controlled by Chinese merchants, it was the Filipinos who actually ensured that the galleons could be built and operated in the Philippines. Without the cooperation and assistance of the Filipinos, who provided the manpower, materials and provisions required to operate the galleons, the trade run would not have been possible. Even though the Philippines provided the Spanish shipwrights with an endless supply of timber for the construction of the galleons, the job of painstakingly cutting down and transporting the heavy logs to the shipyard was performed by Filipinos. They were recruited by the Spaniards for this purpose and were, in turn, paid a small wage and provided with a rice allowance. Moreover, Filipinos were employed as skilled and unskilled laborers in jobs that ranged from carpenters to caulkers and as crew members on the galleons.

Other components used in the construction and operation of the galleons were provided to the shipyards by the Filipino farmers and artisans. These included the large woven sheets of cloth employed in the production of the sails; abaca hemp fibers used in the production of ropes, cables and rigging and an endless supply of coconut husks and Pili nut oil serving as caulking materials. The farmers provided huge quantities of fresh fruits, vegetables, soya beans, yams, coconut oil, spices, rice and livestock required by the galleons as provisions for their long voyages across the Pacific. These were provided to the Spanish government by the Filipinos in lieu of paying the compulsory taxes in cash that they were compelled to pay every year. As a consequence of these ongoing practices, the Spaniards and the shipwrights at the Cavite shipyard were able to build the galleons gratis without having to receive funds from the viceroyalty in Mexico to supplement their costs or the need to import large quantities of supplies and equipment they required from Mexico or Spain.

The Spanish colonial government owned the galleons and provided the shipwrights who were able to construct the ships using the vast numbers of workers at their disposal. All of the senior positions in the shipyard were held by Spaniards, but as their numbers were few in the country, they had no choice but to train the large teams of Chinese and Filipino carpenters who worked alongside them and who provided a host of other skills important in the job of constructing sea vessels. In time, the Spaniards came to depend on the skills provided by the Chinese and Filipino carpenters. The competent Chinese and Filipino carpenters were kept busy at the shipyard as they constructed the

decks, masts and yards for the galleons from which the sails were hung. As carpenter sawyers they produced the braces for the interior of the ships, which were used to hold up the decks.

In addition to serving as carpenters at the Cavite shipyard, Governor Fernando Valdes Tamon, pointed out that the Chinese and Filipino employees were involved in a number of other jobs during the eighteenth century. These included the fact that both groups were employed as caulkers and as general laborers. They also worked as delivery men sailing on rafts which brought to the shipyard supplies for the galleons and galleys constructed there such as rigging, tools and other equipment. When employed as caulkers, they used coconut husk and Pili nut oil to produce the caulking materials that they placed between the wooden planks of the ship to ensure the vessel was waterproof. The Chinese and Filipino carpenters and caulkers worked on a daily basis and did not live at the shipyard, but returned to their homes at the end of the work day. They were paid daily for their labor, unlike other employees of the shipyard who actually lived on the premises, but did not receive a rice allowance.

When the French world traveler, Le Gentil, arrived in the Philippines during the eighteenth century, he was impressed by the quality of work performed by the Spanish carpenters at the Cavite shipyard. He wrote, “The Manilenos have excellent carpenters, and one must recognize that the work at Cavite is very skillfully done. The overhauling of the galleons is very well done, but costs exorbitantly dear.” But not everyone was of the same opinion as Le Gentil. Governor Francisco Jose Obando (1746-1754), was on the contrary quite dismayed by what he found at the Cavite shipyard. He complained that there were too few skilled shipwrights at Cavite to organize and manage the work of constructing the sea vessels. According to Governor Obando, men with little experience in building the ships were often put in charge of constructing the vessels. He said that the inexperienced men working at the shipyard had, “a total negligence and a lack of practice and knowledge of modern construction.” His comments came at a time when Manila was still reeling after the capture of the *Nuestra Senora de la Covadonga* by Commodore George Anson in 1743. The colony would have experienced huge financial losses through the loss of the galleon and may not have been in a position to build another galleon so quickly.

While the Spaniards and Chinese controlled the majority of the businesses in Manila including the galleon trade, it was the Chinese and Filipinos who provided most of the labor involved in the construction, careening and repairing of the vessels. In addition, they became seamen employed on many Spanish sea vessels, as well as farming the land and growing the majority of the foods consumed in

the colony and provisioning the ships. The Chinese, in particular, provided the skills required in the shipyard such as carpentry and iron mongering, but also served as crew members of the galleons which journeyed to Acapulco.

Philippine hardwoods were hauled to the shipyards of Cavite, Mindoro, Marinduque and Masbate, as well as other locations in the islands where the galleons were built throughout the colonial period. It was backbreaking work, but many of the Filipinos involved in this labor had very little choice in the matter. They were often forcefully recruited by the Spaniards for projects such as the construction of the galleons and galleys. Large numbers of Filipinos were removed from their homes and families to work in gangs or teams on the various work projects. As shipbuilding at Cavite and in other locations was an ongoing pursuit, which required a large work force, it was difficult escaping from the clutches of the Spanish officials who were searching for workers. Filipinos were also recruited to serve as crew members on the galleons and it is not surprising that many Filipinos, when arriving in Acapulco, decided to flee from the ship and disappear into the communities of Mexico where they lived out their lives as immigrants. In modern times, the descendants of these early Filipino migrants can still be found in the small towns along the Pacific coast of Mexico.

In 1619, Captain Sebastian de Pineda, wrote of the many Filipinos and Chinese who were then working in the Philippine shipyards. He also described how many of the workmen lost their lives through conflicts between the Spaniards with the Muslims of Mindanao when they were recruited as soldiers, as well as through the hard work they encountered as employees in the shipyard. “When a fleet was being prepared in Cavite there were generally 1,400 of these carpenters (Filipinos and Chinese) there. Just now there are very few, for when the Mindanao enemies burned one galleon and two pataches in the past year in 1617, which are being built in the shipyard of Pantao, 60 leguas from the city of Manila, they captured more than 400 of the workmen and killed more than 200 others; while many have died through the severe work in building. And because they have been paid for five years nothing except a little aid, many have fled from the land; and so few remain that when the last ships sailed from the city and port of Manila last year, 1618, there were not 100 of those Indians in Cavite.” [55]

Le Gentil wrote that Filipinos, who were mainly involved in the cutting and hauling of the timber to the shipyards, were paid a small allowance in the eighteenth century. This was also the case a century earlier when Captain Sebastian de Pineda wrote in the seventeenth century that the Filipinos who cut trees in the forest were paid seven to eight reales a month for their labor and also received a daily rice

allowance. The skilled Filipino workers received ten to twelve reales a month. If they were involved in the construction of the masts and yards, they were paid eight reales a month with double rations of rice.

There were many other Filipinos and Chinese who worked inside the shipyard as laborers, but they received a yearly wage and a rice allotment. Their jobs would have included sewing the ship's sails, cask producers (coopers), blacksmiths, warehouse workers and a category listed as "scuttlers," which may have been men who worked with the carpenters.

The Filipino and Chinese laborers came under the Spanish "corvee" labor program known as "Polos y Servicios." The polo system provided the colonial government with a quota of men from each village or "barangay" for their various projects including the construction of the galleons and general work at the shipyards, as well as the building of fortresses, government structures, road repairs, churches and other undertakings. Moreover, the Filipino farmers were forced by the mayors of their areas to grow coconuts for coconut wine, oil and husks (coir). The coconut husks were used in the production of caulking materials. They also had to grow abaca hemp for its fibers, which were used to produce ropes, cables and rigging for the sea vessels. Ropes were also made of sugar and palm fibers. The sails for the ships came from the province of Ilocos and consisted of cotton blankets. The Filipinos who produced the long strips of cotton paid the government their yearly taxes in kind by providing them with the cotton strips needed for the sails. If the Filipino cotton producer did not comply with the order to grow these commodities, they were heavily fined.

As mentioned earlier, they were recruited to work as sailors on the galleons, soldiers, and porters and during times of conflicts or uprisings they often had to participate in these conflicts on behalf of the colonial government. The Filipinos and Chinese laborers resented having to participate in these programs, but they had no recourse but to comply with the wishes of the Spaniards. If they were recruited, they had to leave their families and their hometowns and work for the colonial government often for a very low remuneration. Skilled Chinese workers were paid a little bit better than the unskilled laborers which were mostly Filipinos. Another aspect of the enforced labor the Filipinos had to provide to the Spaniards was the system known as "servicios." Both Filipinos and Chinese were required to work in the homes of the Spaniards or for the clergy in the churches as servants.

As Corpuz states, the colonial government was continuously searching for men to provide a labor pool for their various projects. Filipinos often found themselves enmeshed in a difficult system that

had little regard for their personal lives or circumstances. Men were basically torn away from their families, homes and livelihoods to work for the Spaniards. It is no wonder that many revolted against the government for what they perceived were excessive abuses of their human rights. As Corpuz said,

"As may be expected, large numbers of Filipinos had to be continually drafted for these projects. A man chosen for the polos, but unable to serve for some reason – a sick wife or a crop ripe for harvesting – would borrow money to pay someone else – if available, to work in his place. He would not be able to pay off the debt. He worked it off, ended up a servant, or lost his property. According to a 1620 account of the weight of the polos drove men to flee their villages or brought them into slavery. Some died, the rest were ruined. The polos for shipbuilding directly led to the uprisings in Palapag and in Pampanga. The Spanish king had ample warning in 1619. Another warning was even blunter. If the king did not prohibit shipbuilding 'no people will be left.' A royal decree was in fact issued in 1630 prohibiting the construction of the large ships in Filipinas, but as the previous paragraphs show the building of the galleons continued. When a repartimiento de polo (corvee labor) took men from Pampanga on an expedition to discover the gold mines in northern Luzon 1581, they were impressed without being allowed to plant their fields. Many of them died from cruel treatment in the repartimiento. The next year there was famine in Pampanga. In Lubao alone, more than 1,000 people died of starvation. The cortes de Madera (cutting timber) usually took the men away from their homes for months. The mayors were especially guilty of this for they made it a lucrative business in supplying Manila with firewood, using unpaid labor of the men in the felling of trees. " [56]

Fort San Felipe (La Fuerza de San Felipe)

Within the city of Cavite there was a small military citadel known as "La Fuerza de San Felipe or Fort San Felipe." The structure was designed according to the traditional architectural styles of the day. It was constructed during the years of 1609 to 1616 as an irregularly shaped quadrilateral structure with four bastions located at each one of its four corners. There were four curtained walls one of which, the southern wall had an entry gate leading into the interior of the fort. Along the fort's eastern side, a longer wall had been constructed, which faced the seashore where the galleons were under construction. Along this wall, there were twenty mounted cannons atop the parapets of this area to defend this approach to Cavite from its eastern side.

The interior space of the fort measured 1,410 feet and housed the barracks of the soldiers. Additional structures within this interior

space included a munitions store, gunpowder storerooms, a water tank and offices related to the military activities conducted at the Fort San Felipe.

Three infantry companies of 180 men each were stationed at Fort San Felipe. One of these was commanded by the castellan of Cavite, the second by a sergeant major and the third by a captain. Each company had its own chief officers, lower-level enlisted soldiers, an artillery captain with twenty-four artillery gunners, the castellan's lieutenant, three adjutants, two artillery gun-carriage carpenters and a war scrivener. There were also 220 Filipino Pampangan infantry soldiers posted to the fort with their own brigadier sergeant major and other officers. Of this Filipino company of soldiers, 120 were also sawyers of timber. All of these officers and soldiers, both Spanish and Filipinos, received a combined monthly salary totaling 11,580 pesos, plus an annual rice ration, which was supplied by the government's royal fund and from supplies from warehouses in Manila.

Military Personnel of Fort San Felipe

The Castellan and a Lieutenant Castellan
Sergeant Major and additional Sergeants
A Spanish Infantry Captain
An Artillery Captain
A Lieutenant Castellan
Three Adjutants
A War Scrivener
The Filipino Pampanga Field Master
The Filipino Sergeant Major
A Filipino Second Lieutenant and Adjutant
The Spanish Soldiers
Armor Bearers, Standard Bearers, Drum Player, Fife Player
The Artillery Gunners
Two Artillery Carpenters
Lower Enlistment Pampanga Standard Bearers, Fifes, and Drums
220 Pampangan Soldiers – These included "aventajados," (privates), who were qualified timber sawyers.

The Weapons and Supplies for the Maintenance of the Forces of Fort San Felipe

When Governor Fernando Valdes Tamon conducted an inventory of the weaponry contained at Fort San Felipe, he found that it was well supplied with artillery. It was apparent that the officers in charge of the fort had taken quite defensive measures to protect the naval port and the shipbuilding activities that were taking place there on a regular basis. His inventory included the following:

Bronze Cannons: 109 cannons raging in caliber from 1 to 40

Iron Cannons: 251 cannons ranging in caliber from 1 to 18
Replacement Supplies Other Than Those in Active Service:
Two 8 oz caliber small bronze artillery guns
4 small iron cannons of the same caliber
101 stone throwing engines with 216 chambers and iron slides
16,905 iron balls for the artillery supply
207 diamond point iron bars
65 cloven iron bars
22 iron angelotes
190 iron grenades
142 muskets
221 match-lock harquebusiers
16 rifles some with bayonets
9 pistols
1 blunderbuss
6,772 balls, 2,910 iron, 62 in ramada and the remainder of lead.
480 hand weapons: cutlasses, dress swords, machetes, lances, pikes, halberds, double edged halberds and half-moon hatchets, chuzos, languinatas and spoontoons
400 arrobas of gunpowder supply

Officers of Fort San Felipe Monthly Salaries (All Received a Monthly Rice Ration)

The Castellan - Salary 100 pesos
Lieutenant Castellan - Salary 15 pesos
Sergeant Major – Salary 25 pesos
Spanish Infantry Captain - Salary 15 pesos
Second Lieutenant – Salary 4 pesos
Sergeants - Salary 3 pesos
Artillery Captain - Salary 15 pesos
3 Adjutants - Salaries at 6 pesos each
War Scrivener - Salary 8 pesos
The Pampanga (Filipino) /Field Master - Salary 10 pesos
Sergeant Major (Filipino) – Salary 6 pesos
Second Lieutenant, Sergeant and Adjutant (Filipinos) - Salaries 2 pesos each
Spanish Soldiers - Salaries 2 pesos each
Armor-bearers, standard-bearers, drum, fife - Salaries at 2 pesos each
Artillery Gunners – Salaries at 2 pesos each
Two Artillery Carpenters - Salaries at 2 pesos each
Lower Enlistment Pampanga (Filipino) standard-bearers, fifes and drums - Salaries at 6 pesos each

220 Pampanga (Filipino soldiers) - Salaries at 1 pesos each

The Expense of Building a Galleon

In Spain, the expense incurred when a galleon was constructed for the king, was incorporated into the contract between the builder and the government. However, while the king may have had to spend a great deal of funds for the construction of a single warship galleon, in the Philippines, it may have been a less expensive undertaking. For Spanish shipwrights, the cost of supplying materials to construct a galleon such as wood was probably the most expensive material they had to find. But in the Philippines, during the sixteenth and seventeenth centuries, there was an abundant supply of free lumber in the country. The tropical hardwoods were especially sought after as they were insect resistant and sea worms could not penetrate hulls made of these woods. The government paid the salaries of the individuals working at Fort San Felipe, as well as in the shipyard with, in most cases, providing them with rice allowances. As manpower was also provided as crews from the local population for the galleons in Manila, Filipinos and Chinese formed part of the crew and they were generally paid lower salaries in comparison to the Spaniards who held positions of authority at the fort and in the shipyard.

Other expenses the government incurred were for the supply of provisions and equipment for the shipyard and Fort San Felipe. However, most of the provisions and supplies were provided to the government by the Filipinos in lieu of paying taxes in cash. At the time, this method of paying one's taxes in produce and commodities or finished work such as the woven cloth which was sewn into sails was an accepted practice. For example, the coconuts, rice, vinegar, sugar, oil, wine, abaca, foods, were submitted to the government in payment of their taxes rather than having to pay in cash. Consequently, the government was in receipt of provisions they did not have to pay for.

Le Gentil was able to uncover some of the "so called" expenses involved in the construction of the galleons during the eighteenth century. He wrote saying that timber was plentiful in the Philippines and labor costs were inexpensive if compared to salaries paid in Spain. "Coming back to the construction of the galleons, one may imagine from what I have said as to the heavy expense of docking, what it costs to build one of these vessels. The *San Carlos* (galleon), which I saw in 1766, cost the king nearly 130,000 pesos. Apropos of this it should be stated that the king owns the forests and that he has no occasion to buy timber, for the Philippines produces an excellent quality of that commodity. Furthermore, the cost of labor in Manila is next to nothing. Why then should it be necessary to spend this enormous and exorbitant sum of more than 680,000 francs to build a

ship of from 5 to 600 tons burden? ”[57]

Spanish Shipyards in Spain and in the Americas

In the sixteenth century, there were two main areas in Spain where galleons were constructed. The first was along the northeastern coasts in the Basque region from La Coruna to Santander. Both cities were renowned for their maritime history and trade with other European countries. In this area, experienced and skilled Basque naval shipwrights and master carpenters could be found. Moreover, it was an area where the materials such as cordage, canvas, pitch, timber could be sourced. In particular, Bilbao oak, which was used in the construction of Spanish galleons of the peninsula, could be easily obtained locally. Oak was also purchased from the forested areas of the Pyrenees and from Germany. Pine trees were sourced locally and were used for the construction of the masts. The Basque shipbuilders produced a great number of vessels for private use by merchants and for the government as warship galleons. The area was also well known for its production of weaponry.

The second shipbuilding area was located in southern Spain along the Mediterranean coasts. Andalusia was the preferred shipbuilding area as it catered to the needs of the busy ports of Seville and Cadiz. Along the coastal area of Barcelona, smaller vessels such as galleys were constructed. When Philip II became the king of both Spain and Portugal in 1581, galleons were also constructed at the port of Lisbon.

Of all of the Spanish ports in Spain, the Americas and in the Philippines, Cadiz was the finest of them all. It was equipped with a shipyard, dry docks, careening facilities and warehouses. The individual shipping companies eventually set up their own workshops at the Trocadero shipyard. “Cadiz had a protective sea wall and breakwater jetty; even more important were the huge, nearby works that resulted in the Arsenal of La Carraca and the privately funded works that deepened the Trocadero navigation channel, which were performed in marshy terrain that required substantial use of tree trunk piles, upon which quays, dry docks etc., were constructed. These were built with boxed rubblework and even with hewn quarried rock. These techniques were also used for the east coast quays of Havana and those on the land spur opposite this, and also for the quay constructed in Veracruz, which were all of the breakwater jetty type. ”[58]

At the American shipyards, vessels could be constructed, careened and repaired. The most important of the ports for all three activities was Havana. In Havana, there was a thriving ship building industry in operation by 1590. These lighter vessels consisted of mostly frigates which were able to travel faster and could transport treasure from the Americas to Spain. They served in a supplemental capacity to the Atlantic fleets. By 1610, the Spaniards began constructing galleons at

the Havana shipyard for use in the Atlantic fleet and for inter-island trade in the Caribbean. A royal order of June 1638 stated that sea vessels built at the ports of Havana, Cartagena, Santo Domingo, Puerto Rico, Jamaica and Campeche, Mexico, would be provided with all of the privileges enjoyed by similarly constructed vessels in Spain. The royal order was extended ten years later to all vessels built in the Americas.

Due to the fact that the ships of the Atlantic fleet were repaired in Havana before sailing to Spain, the city provided the crews of the vessels with a place where they could rest and relax. The ships were also provisioned there for the return journey to Cadiz. While the vessels awaited the arrival of the other galleons of the fleet, the officers took the opportunity to repair and careen their ships at the Havana shipyard. Thus, Havana in more ways than one became an important port of call for the galleons even though it had very little in the way of gold, silver or other commodities which Spain could have used to enrich its royal treasury.

As Havana had a ready source of timber available on the island, it was deemed a suitable location to build vessels for use in the Atlantic trade rather than depending on galleons being built in Spain where it was becoming difficult to find a steady supply of timber. At the Havana shipyard, the most preferred type of wood used in ship construction was another durable hardwood, mahogany. The shipwrights used mahogany rather than oak as it was more suitable to withstand the effects of sea erosion.

Archaeological evidence of Havana's shipbuilding activities was found when a stone platform was uncovered by Cuban archaeologists. "In Old Havana an old shipbuilding altar was found. This was a stone platform on which ships were constructed. Holes spaced along the altar show where shipbuilders inserted stocks to support the keel and the skeleton of the ship. Later (other) relics of an older and more elaborate shipyard east of Havana (were found). Shipbuilding in Havana began with a flourish. After the British destroyed the Spanish Armada in 1588 and continued well into the eighteenth century Spain discovered it was cheaper to build ships here (in Havana), where there were slaves. And they built well. When a ship was called 'genuinely built in Havana,' a buyer knew it was a good ship and our wood lasted twice as long as European wood." [59]

In Havana, as well as the other ports in the Spanish colonies involved in shipbuilding, they had to import tools from Spain, as well as hardware, cordage and rigging for the vessels they constructed. Apparently, these items could not be sourced locally. As a result of this necessity to import the materials, supplies and equipment they needed from Spain, it clearly indicates that the cost of constructing

vessels outside of Spain could be more expensive than those built in the peninsula. However, the businesses involved in the exportation of these items from Spain to the American ports were delighted with the extra source of revenue.

The Spaniards used African slaves to build the sea vessels in Havana. As many as 500 slaves were brought to the Indies, and specifically to Havana, where they were trained at the shipyard and worked on the construction of sea vessels. It is doubtful that they received any sort of wage – most probably just daily food rations.

Although Cartagena became a major seaport for the Tierra Firme galleons arriving in South America, it was mainly used to careen, repair and build smaller vessels for inter-island use in the Caribbean. While the port served as a stop-over for the arriving galleons of the Atlantic fleet, which were on their way to pick up the Peruvian silver from the Panamanian ports of Nombre de Dios or Porto Bello, it was not a major building site for the construction of galleons. This may have been partially due to the inability to easily source the materials required in the shipbuilding process including the thousands of hardwood trees, which were needed to build an individual galleon.

Vessels were also constructed in the west coast of Mexico for the Pacific routes to the Philippines or in Peru to transport silver from Lima to Panama City for the Atlantic fleets. However, the main shipyard in South American was the port of Guayaquil in Ecuador. In that port, ships were constructed and used by Peruvians to transport the silver to Panama, as well as to serve as Pacific coast trade vessels.

There were discussions in government circles about whether or not to build galleons in India, as it was cheaper to construct them there. At the time, it was also thought that it was easier to obtain timber in India than it was in the Philippines. Moreover, building the vessels in India seemed an attractive alternative to the Philippines, as the country had a large supply of workers who could be employed in constructing the ships. However, the suggestions to construct the galleons in India remained just that, as the Spanish colonial government in Manila made no attempts to transfer its construction facilities to India.

Spanish Regulations Controlling the Galleons

By the early years of the seventeenth century, Spain had imposed a number of regulations concerning the construction of both warship galleons for the king and merchant ships privately owned and used in the Atlantic trade convoys to the Americas. The regulations formulated by the Spanish government, under the auspices of the king, were known as royal decrees or laws. All of these royal decrees formed an overall legal framework governing the practices concerning the construction and operation of the vessels for the Indies. They were

known as the Laws of the Indies.

The highly bureaucratic Spanish government had also established a number of departments involved in the overseeing of the activities of the military. Through these departments, inspectors continuously ensured that the ships were built according to the specifications they had created. There are sixteenth and seventeenth century books offering specifics and technical knowledge on how to build the galleons from the first step of laying the keel to adding the ribs, decks and so on. The ship building specifications provided the proscribed measurements in minute mathematical detail, as well as indicating the materials needed for the enterprise such as the types of timber required for the various components of the vessel.

For the lay person who is not necessarily interested in building a galleon, the accumulation and detail of the information offered in these tomes can be daunting and not to mention somewhat similar to learning a foreign language. In fact, as so many of the publications concerning ship building are in the Spanish language, one would have to be fluent in that language in order to make sense of the detailed information supplied within their pages. The research information is also written in the handwriting and language styles of the sixteenth and seventeenth centuries, and this too can add to the difficulties of deciphering the materials required for the study of galleon design, construction and navigation.

In any case, prior to the establishment of Spanish governmental regulations regarding the construction of the galleons and other sea vessels, it was difficult to determine how all these regulations affected the construction of the ships in the Philippines. Up until the onset of the regulations, there were at least four vessels departing from the Philippines to Mexico every year. There were no restrictions imposed on the vessels constructed in the Philippines – on their size or their tonnage. Shipwrights had a free hand to construct whatever they wished as long as they had the financing and the resources, which in the Philippines, were plentiful and mostly free.

The ability to construct whatever type vessel the shipwrights deemed necessary came to a halt when in 1593 a Royal Decree signed by Philip II restricted the number of ships which the Spaniards could send to Mexico from Manila. Not only were the number of ships restricted to two ships crossing the Pacific each year – one from Manila to Acapulco and the other from Acapulco to Manila, but the tonnage was also restricted to only 300 tons per vessel. Another vessel, a third ship, was to remain in Acapulco in reserve. Of course, the restrictions came as a blow to the investors in Manila who were reaping huge profits from the trade run. But the investors found a way of getting around the restrictions and this led to a roaring trade in

smuggled goods.

Further regulations were passed in Spain in the seventeenth century, but the two galleons continued to cross the Pacific on a yearly basic unless some unfortunate incident prevented them from doing so. There were still some years in which a galleon was accompanied by another vessel, but usually the ship sailed alone in both directions. In any case, as the restrictions called for one galleon to sail to Acapulco from Manila, the shipwrights in Cavite began building ever larger galleons to carry enormous quantities of cargo and thereby circumventing the restrictions.

Vessels of various tonnages were constructed in Cavite and elsewhere in the Philippines. The trade which mainly originated in China was so tremendously huge that it was necessary to build larger vessels than a ship with only a carrying capacity of 300 tons. During the years from 1589 to 1614, the tonnage size rose from 700 tons to 1,000 tons per ship, while other vessels which served as warships against the Portuguese and the Dutch had increased to more than 2,000 tons. Consequently, the restrictions imposed on a galleon's tonnage were completely ignored by the investors and the shipwrights who were hired to construct the larger vessels in the Philippines.

As in the Spanish convoys of the Atlantic, when one or more ships sailed from the Philippines to Mexico or vice versa, one ship was designated the "capitana" or flagship and the escorting vessel was called the "almiranta." The flagship always took the lead in the convoy with the almiranta protecting the rear of the convoy. Prior to 1593, this was also the protocol followed in the Philippines if the galleon traveled to Mexico accompanied by other vessels.

When a galleon traveled between the Philippines and Mexico, it also had to serve as both a transporter of cargo and as a warship. To defend against attacks by enemy vessels, the galleon carried a complement of soldiers, cannons, ammunition and small weapons. As in the *Nuestra Senora de la Covadonga*, when it was captured by Commodore George Anson in 1743, and the *Nuestra Senora de la Santisima Trinidad* when it was attacked by British warships in 1762, both galleons fought off their attackers using cannons and other weapons they carried on the galleons.

Who Owned the Galleons?

According to government regulations in Spain, the vessels which participated in the Atlantic fleets had to be owned by Spaniards and manned by Spanish crews. From the time of Philip II, this was a major condition concerning the vessels sailing along the sea route from Spain to the Caribbean. Foreigners were not allowed to own the vessels in the Atlantic fleets and foreign officers and crew members were frowned upon. However, in the historical record there was every

indication that foreigners were indeed serving as officers and crew members in the fleets, although presumably they had become Spanish citizens in order to remain in Spain and work on the ships. For example, in 1555, there was an Englishman who became a naturalized Spaniard, Robert Tomson. He lived in Cadiz and sailed aboard a ship owned by another naturalized Englishman, John Sweeting. As Sweeting was married to a Spanish lady from Cadiz, he may have renounced his home country. In command of the ship was yet another Englishman, who became a Spanish citizen, Leonard Chilton.

Foreigners who were not naturalized citizens of Spain were prohibited from owning or commanding a Spanish vessel to the Americas on behalf of Spanish interests without special permission of the king. But this ruling was also ignored when native ships were unavailable and foreign vessels had to be employed. During the seventeenth century, after numerous wars, Spain had no choice but to use foreign made ships in the galleon trade line as she had so few of her own. But the government still insisted that the vessels had to be commanded and manned by Spanish officers and crews. The English and the Dutch were by this time, involved in the construction of high quality merchant vessels, and it was not unusual to find that these foreign built ships were purchased by the Spanish government or by private buyers for use in the Atlantic trade run.

In the Philippines, the galleons were government owned and financed projects using the royal funds of the colony to cover the construction, manning and provisioning expenses. It is interesting to note that when the Spanish colonial government was originally established in Manila in 1571, it was already planning to construct galleons in the country, as well as setting up foundry's to produce weapons.

The entire process of constructing the galleon, from start to finish, came under the watchful eye of the governor of the Philippines. He carried out the royal decrees established in the Law of the Indies as he saw fit. As he was in essence the king's representative in the archipelago, he was in a position of great power in the country. He authorized the construction of a galleon and selected a manager to oversee the entire project. The manager organized the construction activities at the Cavite shipyard and recruited Filipino and Chinese workers in the provinces and locally to work at the shipyard or chop and haul the lumber to Cavite. The governor also decided the date when the galleon was to sail from Cavite.

With the passage of time, the governor's role in the operation of the galleons became questionable. It had become obvious that his control of every aspect concerning the construction, manning, provisioning and the selection of the cargo the vessel carried, led to abuses of the

system. Apparently, while only Spaniards were allocated space on the galleon, it was clear that only a handful of these individuals, who were residents of Manila for the required minimum of ten years residency, were actually in control of the allocated cargo space on the vessel. Not only were the Spaniards using their space on the ship for Chinese cargo, but the members of the clergy were also heavily involved in the trade. They were lending money to individuals who wished to participate in the galleon trade at fifty percent interest rates and they also turned to investing in the trade themselves. As a result of those individuals who were abusing the system, this led to the increase in the number of Spaniards in Manila who found themselves totally destitute. In the seventeenth century, the Spanish government attempted to rectify the situation by establishing a board consisting of prominent Spanish citizens to oversee the activities of the governor and the selection of the Spaniards who were allowed to ship cargo on the galleon. It was an attempt to provide all Spaniards with a fair chance to participate in the trade and receive a share of the profits.

In Spain, the construction of war and merchant vessels was usually contracted by private shipbuilders. One example of this was the Basque nobleman Martin de Arana, an experienced shipwright, who was contracted by the Spanish government in 1625 to build six war galleons. The vessels were purchased by the government in order to accompany the Atlantic trade convoy from Cadiz to the Caribbean. Arana built the vessels in the northeast Basque region of Spain where he was born. The shipyards of Spain during the early years of the seventeenth century, were usually very basic facilities and not as well equipped or as large as the Cavite shipyard during that same time frame. The Spanish shipyards were often conveniently located on the riverbanks of the regions from which the materials the shipwright needed for the construction of the ships could be sourced.

Although Arana had to initially pay for many of the expenses of constructing the six vessels out of his own pocket, he expected that Philip IV (1621-1665), would look favorably upon his family and lavish them with special treatment at court. By requesting that Arana build the six galleons, the king was continuing the policies of his father Philip III, whereby private investors involved in the financing of the construction of galleons for the king would receive, in turn, special recognition and favors. Prior to the new policy of asking private investors to finance the construction of the galleons, the government's royal shipwrights worked in cooperation with private shipbuilders. This led to costly delays in the construction of the vessels, as well as turning out shoddy results. The new policy of allowing the private shipbuilders to build the vessels required by the government had proved quite beneficial as this measure resulted in higher quality work

which was produced in a timelier manner.

In the details contained in the contract the shipwright Arana signed with the government, he was paid for his services in several stages. The payments were made during the process of the construction of the vessel and at the completion of the project. As the ships were built, it was not unusual for government officials to oversee the construction process. The purpose of their presence at the shipyard was to verify that the construction of the vessels conformed to the government's regulations and that the shipwright followed the precise measurements required so that the ships were seaworthy. It was up to the shipwright to pay, out of his own pocket, for all the expenses involved in the construction of the vessels. Part of the expenses he incurred involved the hiring of carpenters and other skilled employees, as well as laborers and materials.

A document dating from 1576 from the Archives of the Indias in Seville provides an insight into the Philippine government's plans for the colony and the beginnings of the galleon trade. In the document, the governor of the colony requested that the Spanish government in Mexico send to the Philippines a number of skilled naval commanders, shipwrights, carpenters and caulkers. Also requested were supplies, equipment and weaponry, which were not available in the Philippines, but had to be imported from Mexico and Spain and used in the construction of sea vessels. Once the Spaniards had begun building sea vessels in the country, and particularly at the shipyard of Cavite, they found other sources for the supplies they required locally rather than depending on Mexico and Spain for these materials. Additional requests listed in the document included the following:

"Twelve carpenters for the same purpose - can be found here, but with difficulty. Twelve caulkers, they will also be taken from the fleet. Two labor chiefs to be taken from here. Commanders for galleys know how to make lateen (triangular) sails. None are available in this land, unless there is one on the fleet. Fifty lombard gunners - none available here except those in the port - try to find some. Two skilled smelters for the foundry making artillery - none available here. Five hundred pikes from here. The iron will be sent from here. There is lumber. Shields - a big number. There is very little armory, heavy artillery, 6 pieces weighing up to 40 quintals; two catapult cannons, none here; and it is very hard to take them to the pier. It would be best to produce them in the islands. A good harquebusier - difficult to find here. Fine rods for nuts and bolts will be sent here though it would be cheaper if they were to come from Spain. Narrow metal plate will also be sent from here. Fine steel for axes of carpenters and other tools will be sent from here." [60]

"Two pairs of large bellows (fuelles) of the best kind made here.

Two small lathes (tornillos) will be sent here. An anvil (yunque) to be sent from here. Two claws or pliers (tenazas) to make barrels or tubes for arquebuses; to be sent from here. Two pieces of sharpeners for grinding to be sent from here. Two dozen carpenter axes to be sent from here. Oil to be sent from here. Lead weight (plomo) available here. Soldering machines or tin plating (estano) some of that coming from Spain must be brought - none available here. Copper is available here. Tallow (sebo) white tallow. Reamers and nail pullers. Indio workers of all occupations: tailors, shoemakers, carpenters, bricklayers or masons. Besides all the above mentioned, I send the smelter who comes to found or cast artillery. A cloak of fine sheer net to wrap the clay to be used for founding (at the blacksmiths) or casting artillery. Two levels (niveles) for leveling purposes; a sledge hammer. Two hand adzes. One medium saw. A quintal of steel to make iron fillings (limas), to make needles to drill the artillery - 29 arrobas and 10 pounds of iron rod to make bores of gun and anvil blocks and pincers and hammers to craft or cast iron for the artillery. A diestock (metal cutter) for making screws or modeling block with seven holes and seven anvil blocks. One anvil and rod and another rod with three screws. ”[61]

The galleon’s officers and crew received a salary from the Manila government for their services. In addition to receiving his wages only the captain of the ship was allowed to carry cargo on the ship. He was permitted to sell this cargo in Acapulco. The other officers and crew members were not allowed this privilege. If they carried cargo on the vessel illegally, it was often confiscated by customs officials in Acapulco and if the culprit was caught, he had to pay a fine and could be punished by the Mexican government. However, these regulations were often ignored by both the officers and the crew. Almost all crew members stashed away some Oriental trinkets in their sea chests in order to sell them in Mexico. This was a common practice on the Manila galleon trade run.

Chapter 6

Construction of the Galleon at the Cavite Shipyard

The earliest vessels employed by the Spaniards consisted of various types of ships including the “galley.” By the early years of the fifteenth century, the use of the galley in European trade routes was already on the decline. The second most popular vessel was the single-decked “caravel,” which was a lightweight ship and greatly employed by Spanish and Portuguese mariners between the fifteenth to the seventeenth centuries. They were smaller, faster ships of 35 to 90 tons with lateen sails (a triangular shaped sail used at the stern end of the vessel).

By 1575, they were beginning to be replaced by the heavier transport ships known as “naos” and the “pataches,” which were faster sailing boats. The patache was one of a range of smaller vessels of 40 to 150 tons used to transport men, deliver dispatches or treasure. Included in this class of vessels, there were other smaller boats known as “pinnaces” and “sloops.” At first, the nao was used as warship, but later it was converted into a merchant vessel. The heavier naos were equipped with a square rig and topsails. Unlike the nao with a rounded hull, the fifth type of sailing vessel, the “galleon,” was a longer and narrower ship. The name “galleon” was derived from the word “galley.” Although the galleon’s length was not as long as a galley, it was constructed with a higher stern superstructure and was broader in the beam than the galley.

The galleon began its existence as a heavily armed warship for the Spanish government and carried the king’s twenty percent share of silver ingots, gold bars and precious gems from the Americas to his Royal Treasury in Spain. The treasure was not transported to Spain on merchant vessels, which were only allowed to carry ordinary cargo under threat of severe penalties. The king also received another twenty percent share of all privately held wealth sent to Spain.

The merchant vessels were not as heavily armed as the warships. As it was difficult for the merchant vessels to defend themselves against pirates, they were escorted to and from the Americas by the warship galleons. Both the warship galleons and merchant vessels were initially of 300 to 600 tons each, but the tonnage of the ships rose to 1,000 to 2,000 tons each as trade with the Americas increased. In the Philippines, as the Manila-Acapulco galleons had to serve in a dual capacity, as both a merchant vessel and a warship, it was heavily armed in order to defend itself from enemy attacks. As a result of this duality, the Manila-Acapulco galleon can be classified as being a

merchant-warship galleon.

The Spaniards referred to the galleons as “Castles of the Sea” *(*Castillos del Mar*),* as they were constructed to resemble their medieval castles on land, which can still be found throughout the peninsula. In the same way that the castle rose upwardly from ground level to a series of high towers, the galleon also had its various levels from the keel to its superstructures. The ship usually had at least five decks, which consisted of the lower deck, the gun deck, main deck, quarter deck and the poop deck. In a similar fashion to the land castles, it was well armed with cannons and guns. In a land castle, the dark and dank dungeons became the galleon’s hold or bodega. The castle’s interior courtyard became the ship’s main deck. The gun ports of the vessel could be seen in the same light as the gun emplacements in the castle’s walls.

A majestic stern superstructure rose from the ship’s main deck. Known as the stern castle (Castillo), it was located at the back portion of the vessel. At the other end of the ship, at the bow, another castle was located, which was known as the smaller forecastle. While other European seafaring countries were reducing the size of their stern superstructures, the Spaniards continued adding ever towering structures to their vessels well into the seventeenth century. It was not unusual to find that both the stern and the forecastle on some galleons had been elaborately constructed and decorated in gold leaf.

Within the tall stern castle, which often consisted of two or three levels, was the captain’s cabin, and quarters for the officers and passengers. Also located at the stern was an area known as the “tolda,” where the bridge or “puente” was located. The tolda is a word which has its origins from the Arabic word, “Alcazar,” which means fortress. Above the tolda was a smaller area known as the “toldilla.” A smaller cabin was located in the toldilla, which was known as the “camarote.” As this was the highest part of the ship, the chief pilot was lodged here. Consequently, in the same way that the land castles were designed as impregnable land fortresses, the Spanish shipwrights applied these same attributes to the galleons they designed and built.

In the sixteenth century, the stern castle became wider and the ship assumed the shape it was most characterized by such as the long hull, lower forecastle and the introduction of the navigational whip staff connected to the tiller and rudder. By the mid-seventeenth century, the ship was constructed with three decks and had the capacity to carry as many as one hundred guns. A squared mizzen mast sail was added to the stern of the ship.

By 1648, Spanish shipwrights began designing galleons employing some of the changing features of ship design used by other European countries. As ship construction became more sophisticated in England

and in Holland, both countries had an influence on the ships designed in Spain. The whip staff was eventually replaced by a wheel in the eighteenth century, which was connected to the rudder by ropes or chains.

The laying of the keel and the addition of the stem post at the fore and the stern post at the aft of the vessel, determined the size of the ship. These three components provided the basis for the mathematical calculations and measurements for each component of the vessel. In Spain as in the Philippines, the addition of the stern post at the rear of the ship and the stem post at the bow, were both added to the vessel according to specified government regulations. As early as 1575, the master shipbuilder could calculate the proportions for the ship he was building once the keel was laid.

A galleon of seventeenth century Spain was provided with a main mast, foremast and a mizzen mast. Both the main mast and the foremast carried three squared sails including a top gallant sail. The mizzen mast (located at the stern or aft end of the vessel) carried two sails and a lateen (triangular) sail. At the front (or fore part) of the ship, the slender bowsprit pole at the bow carried two sails, the bowsprit sail and the spritsail. Below the bowsprit was the beak head which jutted out from the vessel and may have originally been used to ram other ships or to break the crashing waves before it. The beak head was often elaborately decorated. As it was also at the head of the vessel where the crew's toilets were located, on British ships, it was simply referred to as "the head."

In the Philippines, the galleon designs closely followed the regulated designs used in Spain to construct their vessels. Given the fact that the educated Spaniards who arrived in the archipelago to work as government functionaries or to serve in the colony's military garrisons, would have been familiar or at least knew of the guidelines and regulations imposed upon shipbuilders by the Spanish government, these would have been followed in the shipyards of the archipelago. The design regulations had to be adhered to in Spain when constructing government owned war vessels or merchant ships for the Atlantic trade convoys. There is every indication that these same design regulations were extended to merchant vessels of the Pacific trade route which also doubled as warships as they did not travel in convoys but solitary.

One 1587 publication about shipbuilding and navigation was the "Instruccion Nautica Para Navegar" by Diego Garcia de Palacio, a Basque from Santander. The book provides an explanation of the history of navigation in Spain, as well as the various components of a galleon, measurements of all its parts, descriptions of what goes where when building a galleon, including illustrations of same. All of this

information offered an insight into shipbuilding in Spain during the latter years of the sixteenth century. What is interesting is that by that time, shipbuilding had already reached a very high level of sophistication and a proficiency in the construction of sea vessels. After centuries of sailing the European seas and shipbuilding in Spain, the vessels constructed in the peninsula were built using precisely specified mathematical formulas in order to enable shipwrights, no matter where they were located, to build vessels such as galleons skillfully and competently. Every single component of a ship had its Spanish name, measurement and position in the ship. The components had to be measured to precise specifications in order to ensure that the ship would remain seaworthy. One small error in the construction of the vessel could lead to the demise of a ship when at sea, so all measurements had to be completely accurate.

The construction of a sea vessel was conducted by a master shipbuilder of whom there were many in Spain in the sixteenth and seventeenth centuries. The galleons were constructed at one of the shipyards in Spain or in some cases near rivers, where the completed vessel could be built and placed in the water at the appropriate moment. There were many shipyard workers in Seville and in the Basque regions of northeast Spain. They included skilled carpenters, caulkers and laborers who were experienced in shipbuilding and were able to continuously work in these jobs as long as the ships were constructed.

In the Philippines, Spanish master shipwrights, who were familiar with the intricacies of shipbuilding in Spain, brought these techniques to Manila. Once in the Philippines, they were involved in the construction of hundreds of sea vessels which were built throughout the period of the Spanish colonization of the country from 1565 to 1898. We also know that over the course of the galleon trade years from 1565 to 1815, when the Mexican War of Independence in effect ended this trade, that Spaniards in the Philippines were involved in the construction of galleons for the transpacific trade run. Hundreds of these ships were built over the years – many of which arrived in Mexico and completed the voyage, but others were lost in storms, captured by enemies of Spain, shipwrecked or simply disappeared without a trace while journeying to Mexico.

There were Spanish shipwrights who continuously worked at the Cavite shipyard where they were involved in the design and construction of a variety of sea vessels including the galleons and galleys. They came to the Philippines from Mexico, Havana and from Spain and were also involved in the careening and repair of the vessels. But although the majority of the vessels built in the Cavite shipyard were seaworthy, and most had successfully made the journey

to Acapulco, there were a few that were unable to leave the port as it was quickly realized that there was a construction defect in the vessel. In that case, the ship had to remain at the port for repairs or abandonment. In other cases, it sank almost as quickly as the construction was completed.

Tonnage (El Arqueamiento) of the Galleon

When referring to a ship's tonnage, this actually means the carrying capacity of the vessel. In the Philippines, the tonnage of the galleons ranged from 300 to 1,000 tons in the seventeenth century to as much as 2,000 tons by the eighteenth century. As ship designs and construction became more sophisticated and master shipbuilders increased their understanding of how to build larger sea vessels, the tonnage increased exponentially to carry heavier cargoes.

Even though Philip II's royal order of 1593 indicated that only galleons of 300 tons were permitted to travel to Acapulco from Manila, these restrictions were obviously ignored in the Philippines. Into the eighteenth century, larger vessels with greater carrying capacities were constructed for the Pacific trade run. For example, the *Nuestra Senora de Rosario*, which was in service from 1746 to 1761, had a carrying capacity of 1,710 tons. Within her hold and throughout the ship, she carried as many as 18,667 pieces of cargo even though the fixed amount was restricted by the Spanish government to 4,000 pieces. The *Nuestra Senora de Rosario's* keel measured 156 feet in length. Ships such as the *Nuestra Senora de Rosario* had become the norm. In 1762, the British captured another large galleon the *Nuestra Senora de la Santisima Trinidad*, which was a 2,000 ton vessel.

When two British frigates the *Argo* and the *Panther* intercepted the galleon, she had lost a mast during a storm at sea. She was attempting to return to Cavite for repairs and was sailing through the San Bernardino Strait when the British ships came upon her. After the vessel was captured, the British officers removed her cargo and sailed her to Cavite. Later, she was taken to Plymouth, England and arrived there on June 9, 1763. In Plymouth, she was considered an object of curiosity and became a tourist destination. The British public was amazed by her massive size and claimed that the galleon was the largest vessel they had ever seen in England. She had a gun deck of 167 feet in length and carried 60 guns. The breadth of the ship was 50 feet wide, while her depth of the hold from the poop deck was 30 feet and her draught was 28 feet.

In 1619, Captain Sebastian de Pineda, provided the measurements of seven galleons in a report he prepared for the Council of Indies in Seville. Six of the vessels had been constructed in the Philippines, while one ship was built in India in 1617. In the report, he stated that several of the vessels had sustained damage and were at the port of

Cavite undergoing careening and repairs. The ships had been damaged in warfare and by sea worms and were apparently leaking. Moreover, several needed to replace the masts and yards as they had rotted over the years. Captain Sebastian de Pineda mentioned that five of the vessels were sailing to Marinduque where they could be repaired and careened. The reason for taking this step was that it was less expensive to provide the repair and careening services in Marinduque than hauling the extra wood needed to the Cavite shipyard for the same purpose. The other ships remained in Cavite where they were repaired. The ships involved are listed below, but it should be noted that the measurements used in Spain and in the Philippines was the "codo." One codo equaled 22 inches in length. The codo was subdivided into "dedos" (fingers) of 1 dedo equaling 0.67 inches.

The Salvador - "The royal flagship measures 60 codos (110 ft) along the keel, 12 codos (22 ft) the floor, 82 codos (150 ft 4 inches) from stem to stern (i.e., overall length), depth of hold 19 codos (34 ft 10 inches), extreme breadth 26 codos (47 ft 10 inches), sternpost transom 12 codos (22 ft); lower deck 1 codo (1 ft 10 inches), upper deck 19 codos (34 ft 10 inches), with the space between of 4 codos (7 ft 4 inches)."

The Espiritu Santo – "The galleon (in which Don Alonso Fajardo came last year 1618) measures 50 codos along the keel, 10 codos in floor, 70 codos length overall, 17 codos depth of hold, 23 codos extreme breadth, 10 codos sternpost transom; lower deck 13 and one half codos and upper deck 17 codos."

The San Felipe – "The galleon - 50 codos along the keel, 10 codos in floor, 70 codos length overall, 15 codos depth of hold, 22 and one half extreme breadth; lower deck 11 and one half codos, upper deck 15, and sternpost transom 11 codos."

The Santiago – "The galleon has the same measurement of keel, floor, overall, depth of hold, extreme breadth, and sternpost transom, and the same space between decks."

The San Juan Bautista – "The galleon has the same measurements as *San Felipe* and *Santiago*."

The San Miguel – "The galleon - 49 codos keel, 10 codos in floor, 68 codos overall, 18 codos depth of hold, 23 codos extreme breadth, 11 codos sternpost transom; the lower deck 14 codos, upper deck 18 codos."

The Nuestra Senora de Guadalupe – " 46 codos keel, 9 codos in floor, 64 codos overall, 13 codos depth of hold, 21 codos extreme breadth; lower deck 9 and one half codos, upper deck 13 codos, sternpost transom 10 codos."

The Nao San Laurencio – "Built in India 23 years ago, measures keel 46 codos, over all 60, 12 codos depth of hold, 19 codos extreme

breadth; and it has three decks, quarter deck and forecastle." [62]

The Materials Used in the Construction of the Galleons

Wood

Spanish shipwrights estimated that they needed at least two thousand trees for the construction of one galleon. This was probably also true in the Philippines, although there are no historical records indicating how many trees were actually cut down during the colonial period in order to construct sea vessels. But as the construction of the vessels was carried out for almost two hundred and fifty years, one can only surmise that a tremendous number of trees were felled for the shipbuilding industry.

The best quality tropical hardwoods available in the Philippines were used for the construction of the sea vessels. According to Schurz's study of the Manila galleons, teak was preferred as it was insect proof, but some scholars dispute that assertion. They assert that the main hardwoods used by the Spanish shipwrights were banaba, palo maria, dangan and coamings.

Probably one of the most interesting factors concerning the use of tropical hardwoods for the construction of the galleons was the fact, that many foreign mariners were aware that the galleons were constructed with strong hulls that could resist penetration by cannon fire. For many sailors, it was a frightening prospect knowing that if they attacked a Manila-Acapulco galleon, that its sides could not be penetrated. This was the case when Commodore George Anson captured the Manila galleon the *Nuestra Senora de la Covadonga* in 1743. When he proposed, to his officers and crew members that he wanted to seize the galleon as it returned to Manila from Acapulco, they were apprehensive about the idea. They had all heard stories about the Pacific galleons and how strongly they were built. To Commodore Anson, it was obvious that in order to seize the vessel, he had to employ other tactics to capture the *Nuestra Senora de la Covadonga* otherwise his own vessel the *Centurion* could be destroyed in the process. Luckily for him, he was successful and he was able to seize the prize.

Another commander, Captain Woodes Rogers, also admitted that the Manila galleons were formidable sea vessels. In the early years of the eighteenth century, he described the galleons saying, "These large ships are built with excellent timber that will not splinter; they have very thick sides, much stronger than we build in Europe." When he tried to capture the *Begona* in 1709, he found that the cannon balls fired at the vessel were unable to penetrate the galleon's hull. In another instance, when the English naval frigates the *Panther* and the *Argo*, captured the *Nuestra Senora de la Santisima Trinidad* in 1762

during the British invasion of the Philippines, they were in for a surprise. They had fired more than 1,000 cannon balls at the galleon of 18 and 24 pounds each, but later when they physically took control of the ship, they discovered that the sides of the galleon had remained undamaged.

In 1619, Captain Sebastian de Pineda, wrote a letter to the Council of Indies in Spain in which he described the shipbuilding activities he witnessed in the Philippines. The letter is an important document as it was an eye witness account of how the galleons and other vessels were constructed at Cavite, as well as the types of woods, iron, sails, provisions used in the process. He also wrote of the individuals who were employed at the shipyard. When describing the timber used for the ships, he wrote,

"In those islands is found a wood called maria (palo maria), which is used to make the futtock timbers of all the galleons, galleys, and pataches and all the knees and compass timbers of all sizes required. There is much of this timber from which to select, although, because of the ships built by Don Juan de Silva, the supply of it is now obtained from a distance. That wood is used only for this purpose, for the tree is short and not straight. Capstans of one piece, gears, and some stringer plates (trancaniles) for the curved parts of the prows of vessels and the snatch cleats for the wales (cinta/gunwales of the ship or the waist), are also made from that wood. That said wood does not hole or chip. If a ball is fired into it of eight libras (8 pounds) or less, it does not pierce the wood and if the ball is large, the wood is not splintered. On the contrary, the hole is stopped up at its entrance and egress with the chips forced out by the ball in its passage. That wood is very light, and has a very poor grain for working."

"There is another wood called arguijo (guijo), which is very strong and heavy. It is a certain very tall and very straight tree, like the pine. From it are made the keels, beams, false keels, wales, mast heads (calcetes), and pumps, of whatever size required for that tree, as above stated, grows very tall and straight. Gun stocks, gun carriages and wheels for the artillery are also made from that wood. There is another wood called laguan (lauan). From it is made all the planking and sheathing with which the galleons and galleys are planked. From those trees are made the masts, topmasts and yards of the galleons and galleys. The said tree grows very straight and thick, so that the flagship galleon has its main mast from one that is 72 codos long and 15 palmos in circumference - all in one piece."

"The sheathing and planking hewn from the above named trees for the sheathing of ships is one palmo thick and three or four wide, and the shortest is twelve brazas long. These planks last a long time under water, as the ship worms do not hole them, but above water they

warp and rot, so that they do not last more than two years and especially on the decks if they are not caulked during the winter. The greatest danger is that on account of the haste used in their construction, time is not allowed to cut the wood at the conjunction (of the moon), and to leave it during a year to season, as is required. For if that is done, it last much longer. For all the vessels built during the term of Don Juan de Silva, the galley which was longest in building did not take six months, and all the timber for them was hewn and put in place when green, for the vessels were being built while the wood was being cut."

"There is another wood from which is made planking for the galleys, which is called banaba. It is a certain short tree, about four brazas in height. The galleys are sheathed with it, as the ship worm bores into it but little. The planks are one and one half palmos broad. There are but few of these trees and consequently, they are used only for the above purpose. There is another wood called maria de monteguas, which differs from the first wood of that name. From it are made timbers (latas) for the decks of the galleys, as well as oars for the said galleys. The latter are also made from another wood called guijo. But these are much heavier than those made from the wood maria and last a long time. There is another wood called dangan, which is very strong and of a yellowish color. From it are made stringer plates, chocks of the bowsprit, coamings of the hatchways, strakes and stanchions for the decks. If all these woods are cut at the conjunction and decrease of the moon and seasoned, as above stated, for one year, the ship will last much longer for if they are cut and not seasoned, one must tear up the decks every two years and put down new ones for they are rotten. Likewise the planks along the sides must be changed, with the exception of the futtock timbers and top timbers made of the wood maria for that wood, although cut and not seasoned, never rots because it is always durable without rotting." [63]

In comparison to the Philippines, the wood most often used in the northeastern regions of Spain such as in the Biscay, Asturias and Galician provinces to build the galleons, was oak and other hardwoods. Asturias in particular, supplied a large number of trees for the construction of the galleons. As a hardwood it was considered the most durable for sea vessels. Pine was sourced in the Andalusian region and used in the construction process, but after 1593 any warship galleons or merchant vessels, which had been constructed in the area using pine, were prohibited from sailing in the Atlantic fleets. This was due to the fact that the shipwrights in Andalusia were using unseasoned wood and during the voyage it was found that the bolts holding the planks in place became loose and disconnected, and led to the destruction of the vessel. But in most cases, shipwrights in Spain

used seasoned wood to construct sea vessels, as they understood the necessity of taking this important step to provide seaworthy vessels.

All of the wood used in the construction of sea vessels had to be seasoned for at least one year before it could be used in the building process. However, in the Philippines, timber was often used as soon as it was cut down. One of the major defects of ship building in the Philippines was the fact that in a rush to build the vessels and quickly get them onto the trade run, some of the shipwrights constructed the galleons using unseasoned wood. This practice led to the wood rapidly deteriorating, and by the time the galleon reached Acapulco, it had to have its planks pulled out and new wood set in place. Although the shipbuilders realized they had been risking the ship's seaworthiness, they still decided to use unseasoned wood. They came to the conclusion that even if the ship was built using unseasoned wood, it would be able to make the journey to Acapulco where it would then have to be repaired for its next voyage.

The wood used in Spain, to construct sea vessels, included the preferred first choice of oak. As a result, oak was used in the production of almost the entire vessel including the thick hull planks and interior bracing for the decks. Pine was used for the areas of the ship above the waterline including the ship's masts. Walnut was used for interior furnishings of the cabins and the pumps were made of alder wood. While oak was sourced locally, pine was imported from Flanders and Prussia. Due to over cutting of trees in northern Spain during the sixteenth century, the local supplies of wood decreased As a result, shipwrights began importing timber from other European countries. The government attempted to curtail the increased felling of trees in the north, but their attempts were not always successful.

In order to construct a galleon in Spain of 325 tons, the shipwright needed at least 29,333 feet of wood. Clearly a great amount of timber was required for the completion of one vessel. In Spain, waning supplies of timber meant that the government and private shipbuilders had no choice but to import the timber they required. However, in comparison, there were vast virgin forests in the Philippines during the sixteenth and seventeenth centuries from which to select the tropical hardwoods required for the galleons. But even in the Philippines, as time passed, the sources of timber were becoming difficult to find – especially those that were closer to the shipyards. Laborers had to travel further inland to find the necessary timber for the shipyards. Transporting the timber from great distances also became a major problem. The shipwrights had no choice but to build the galleons and other sea vessels closer to the timber sources for the convenience of obtaining the wood and perhaps being able to construct a galleon in a faster period of time.

Abaca / Hemp (Used in the production of ropes, cables and rigging)

After the galleon was constructed the massive job of providing the vessel with rigging was the next order of business on the ship. The rigging was used to control the sails and yards. The masts on the ship also had to be tied down using ropes and cables to form the shrouds (made of ropes) to secure them to the vessel's sides. This entailed having an endless supply of ropes, cordage and cables to control the ship's navigation at sea. In the Philippines, the use of the abaca plant's fibers provided excellent and inexpensive cordage for rigging. The Philippine abaca, which was produced in Bicol for the galleons is derived from a species of the banana family and was harvested for centuries in the archipelago for its fibers. Even though abaca was not considered a member of the hemp family it was, nevertheless, referred to through the ages as "Manila Hemp." Abaca is much stronger than hemp and grows to almost twenty feet high. The plant's outer sheath, covering the trunk, was harvested and turned into ropes, cables and rigging.

It was necessary to produce ropes, cordage, rigging and cables in the Philippine shipyards for the galleons and other vessels, as Spanish ropes, which were at first sent to Manila from Mexico, arrived in the country completely rotten and of no use. There were two types of rigging used in the Philippines. The first was an older version produced from a palm known as "gamu." This form of rope was used for the shrouds, stays and cables. The second type and the most popular form, was abaca. The skilled Filipinos at Cavite were involved in the production of the ropes and rigging according to the shapes, sizes and width, which were required by the shipwrights. They worked almost around the clock from daybreak to midnight at times and were paid eight reales per month and received a rice ration in return for their labor at Cavite. The plant was also grown in South American colonies and there it was known as "bihau."

In Spain, rigging (jarcia) was purchased in a variety of sizes and weights from local sources as well as from European vendors in Flanders and France. It was covered in pitch and tar in order to make them waterproof. In comparison, shipwrights in Cavite left their cables in their natural state uncovered by either pitch or tar, which no doubt led to their deteriorating at a faster rate.

While the cost of the rigging in Spain was considered more expensive, in the Philippines the opposite was true. Again, as was the case in many other instances where the galleons were concerned, the Filipino farmers provided the Spanish government with abaca in lieu of paying taxes in cash. They grew the abaca plants on their farms and turned over the hemp plants to the shipyards where Filipino and

Chinese workers processed them and turned them into fibers for ropes, cables and rigging. Consequently, the Spaniards of the colonial government were not really expending much of a cost in the construction of the galleons. Given the fact that the Filipinos were supplying almost all of the products and provisions they needed to build the vessels, including their labor and access to a source of free timber and rope fibers, the Spaniards paid very little to construct the ships.

Sails

Filipino weavers in the province of Ilocos, Luzon, provided the Spanish shipwrights with the cloth they needed for the sails. Unlike in Spain, where the cost of a galleon's sails and rigging constituted a major portion of the expense of constructing the vessel, in the Philippines, the situation was quite the reverse. As the government did not have to pay for these items out of the Royal Treasury funds, it was basically provided to them free of charge by Filipino weavers instead of paying their taxes in cash.

Apparently, the Filipinos of the province of Ilocos had long been involved in cottage industries and the production of cotton cloth on weaving looms as well as sewing threads. The cotton cloth was produced in what was then known as "blankets" of sailcloth or "mantas." The long strips of cotton cloth and thread were transported to the Cavite shipyard by the weavers where Filipino and Chinese workers sewed the cotton strips into large single sails. The sails were produced according to the sizes and shapes required by the galleons and other sea vessels. These included two or three sails each for the main, fore, mizzen masts including the top gallant sails, as well as sails for bow sprit and lateen sails.

According to Captain Sebastian de Pineda, the Filipino sailcloth was of a higher quality than similar fabrics produced in Spain and it was more durable. "The canvas (lienco) from which the sails are made in the islands is excellent and much better than what is shipped from Espana, because it is made from cotton. They are certain cloths which are called mantas (blankets or strips of cotton cloth) from the province of Ilocos for the natives of that province manufacture nothing else, and pay your Majesty their tribute in them. They are one tercia (one third of a vara) wide, and as thick as canvas (angeo). They are doubled, and quilted with thread of the same cotton. They last much longer than those of Espana. One vara of this cloth cost less than one half reale. The thread of the same cotton with which they are sewn costs twenty reales per arroba. The cloth brought from Nueva Espana costs your Majesty, when set down in the city of Manila, six reales per vara. Also the thread shipped from Nueva Espana to sew the sails costs six reales per libra. The thread made of hemp, when used with cotton

canvas, is of no use, and does not endure transportation. The ships sailing from Manila to Nueva Espana carry sails for the return voyage and nevertheless have to make others in the port of Acapulco." [64]

It was customary to take extra sails on the galleon in case the sails which were used on the masts were damaged during the voyage. As the construction of the galleons in the Philippines was built using the Spanish galleons of the peninsula as models, they no doubt used the same type of sail configurations for the galleons produced in Cavite. The sails for the galleon were produced according to a set of Spanish government measurements and regulations. These measurements would have been known and followed by the shipbuilders at Cavite.

Iron, Lead and Tin

Even though the Cavite shipwrights used a large quantity of wooden treenails (pegs) to attach planks to the hull, they also used just as many iron nails in the process. The iron ore, rough sheets and rods, which were required by the shipwrights of Cavite, were imported from China, Macau, Japan, India and Mexico. At the shipyard the Chinese and Filipino blacksmiths forged the iron into anchors, iron chains, pikes, nails, bolts, tacks, spikes, keys, pins, rings, rudder pintels and grudgeons, as well as anything else required by the shipwright for the vessels. They also produced tools and artillery for the soldiers. The blacksmiths worked in their own foundry, which was located at the far end of the shipyard.

One historical record indicated that the seventeenth century Governor of the Philippines, Juan de Silva had imported a large quantity of iron nails from China and Japan. When he ordered items, he also sent along patterns of the sizes and shapes of the nails he was interested in purchasing. Both countries produced iron nails at reasonable prices.

Captain Sebastian de Pineda described how the iron ore was brought to the Cavite foundry and worked there into the items required by the shipwright. However, he also pointed out that it was still necessary to receive iron from Mexico for the construction process. "Iron is brought in the rough and is wrought in Cavite and costs your Majesty but twenty-four reales per quintal of five arrobas. There all the nails and bolts are wrought, as well as estoperoles, tacks (tachuelas), and everything else needed. The native Indians (Filipinos) who act as smiths are paid twelve reales per month and the Sangley Chinese blacksmiths twenty-eight reales per month, and their ration of rice, which is equivalent to one half a Spanish celemin. Each of these Chinese works one arroba of rough iron into nails daily and is paid only the said twenty-eight reales per month. They work from midnight until sunset, which is their workday. "[65]

"The nails and iron shipped to the said islands from Nueva Espana

cost your Majesty, delivered in the city of Manila, more than twenty reales of eight per quintal, while there they are made as above stated. But notwithstanding the above, I assert that it is necessary to ship annually from Nueva Espana to the said islands two hundred quintals of rough sheet and rod iron for some necessary articles such as borers for the artillery cast in Manila, and rudder pintels and rudder gudgeons for the ships and galleys; for the iron of Viscaya is more ductile than that of those regions (that is China and Japan) because it is as strong as steel. The other iron things above mentioned that are sent from Nueva Espana to the said islands are unnecessary, for their cost per quintal, when delivered in Manila, will buy four quintals in the islands. The two hundred quintals could be shipped on your Majesty's account from Sevilla where it costs three or four ducados per quintal, and carried by the flagships and almirantas; thus it would not be necessary to buy it in Veracruz at nineteen ducados per quintal." [66]

Mexican foundries also provided the galleon shipwrights with all the iron made items they required from nails to iron chains and anchors. Nail producers in Mexico offered up a variety of nails in numerous sizes and types. The iron they used served the same purposes in the galleon construction as evidenced in the Philippine shipyards. Other iron items were sent to the Philippines from Mexico, which in some cases were of little use in the islands. In particular, the Spanish government in Mexico City shipped to Manila pikes to be used as weapons, but these could easily have been produced in Cavite. In any case, the Spanish soldiers in the Philippines usually did not use them in battles. According to Captain Sebastian de Pineda, he wrote about the iron pikes sent to Manila by the viceroyalty in Mexico, which in his opinion was unnecessary and of little use in the colony.

"It is also the custom to ship pikes with their iron heads from Nueva Espana to the Filipinas islands. Delivered in the city of Manila, they cost your Majesty more than thirty-two reales a piece; but, with thirty-two reales, they can make forty pikes in the city of Manila. It is a weapon that is worthless in those islands and it is not used in them. And even if they were used, there are shafts in the forests of those islands and the native Indian smiths can make the heads. A number of old pipe staves and iron hoops are also shipped from Nueva Espana to the Filipinas islands. Delivered in the city of Manila they cost your Majesty a considerable sum of ducados. That expense can be avoided; for, when those staves arrive here, they are full of holes and rotten, and quite useless. The hoops alone serve in Manila to make nails and bolts from them, which thus come to cost fifty ducados per quintal. They can be made here for thirty three reales. It is sufficient to carry those pipes that hold the water and wine in the ships. "[67]

By 1619, sheets of lead and tin were used to sheath the hull in order

to ensure that the ship remained waterproof, as well as insect and sea worm resistant. The lead and tin were imported from Mexico for this purpose, but the Spaniards in Manila also purchased supplies of lead and tin from China and Japan at cheaper prices than those they paid to Mexican exporters.

Some of the metal artifacts found at the *San Diego* galleon excavation site in the Philippines included the following: "Over 2,400 metal objects were collected from the wreckage of the *San Diego*. The largest items are two categories of iron anchors and 14 bronze cannons together with small cannonballs made of lead and larger ones made of stone. Other metal implements and ornaments collected were made of gold, silver, bronze, brass, copper, iron and lead. Among these finds are a sixteenth century mariner's astrolabe, a compass, gold and silver coins, various items of jewelry and personal ornaments, silver shoe buckles, copper belt fasteners, silverwares, sword hilts, guards and few blades, bronze mortars and pestles, scoops, bells, bell clapper, lead weights and musket shots, a military helmet with high crown, a silver pouring vessel with pedestal foot and the spout embossed with the face of a bearded man – an official seal belonging to Antonio de Morga was also among the recoveries." [68]

Caulking and Waterproofing Materials

When the planks were laid down in the ship along its frame or for the decks, it was necessary, especially below the water line, to waterproof the wood. This was accomplished by using caulking materials, which were quite unique in the Philippines in comparison to those used in Spain. In the Philippines a combination of coconut husks, which was also known as "coir" or "bonte," and the oil from the tropical Pili nut tree, formed the basic caulking materials. The Pili nut tree is a native tree of the Philippines and of the "Canarium ovatum" genus. It is a tall tree with resinous wood and grows to an average height of about 20 meters tall. The kernel of the tree was its most important part. It resembles a pumpkin seed and it is used in the production of chocolate and ice cream in the Philippines. As a food product, it has been exported to Hong Kong and Taiwan and it is currently one of the main ingredients in Chinese moon cakes. The oil which was derived from the tree was produced from the pulp of the tree's young shoots, which are similar in consistency to cotton seed oil and used in modern times in the production of soap and food products.

The work of caulking the vessels at the Cavite shipyard was conducted by skilled Filipino and Chinese caulkers who worked under the supervision of a Spanish master caulker or shipwright. The coconut husks and Pili nut oil were mixed together and then pushed into the seams between the planks, joints, treenails, nails and

knotholes and wherever else it was deemed necessary to fill with caulking materials to ensure waterproofing. Any wood with a flaw such as a knothole had to be placed facing inwards when used as planking and then filled in with caulking. Tar was also used as a sealant. It was brought to the shipyard from Zambales where large deposits of tar were located.

When a vessel was constructed and ready to sail, the captain of the ship had to ensure that caulkers also sailed on the galleon in order to caulk areas as needed during the journey. Although there were carpenters on the vessel, it was usually the caulkers who were the busiest throughout the voyage. The ships were always leaking and in need of repairs with seams opening up and having to be continuously refilled.

In Spain, oakum (estopa), hemp (canamo) and even yarn and hair were used as caulking materials to waterproof the vessels. It would be placed where needed and then covered with tar also known as alquitran, which was a mixture of pitch, tar and grease. Oakum was originally made from old ropes and cordage which were recycled through a method of picking through the ropes with an oakum remover known as a "saca estopa," and then separating the threads. It was prepared as caulking when mixed with tar and was applied using a caulking iron (hierro). In order to protect the hull from sea worms and other organisms, the wood below the water line was also covered with a cloth saturated with tar and a lead sheet was nailed over this, but a combination of tar and hair was also used. When this procedure was completed, the hull was covered with animal or fish grease like lard or oil. An additional layer of tar was used to cover the grease. They also used pitch and other resins to cover the hull to ensure it remained waterproof.

One of the major problems Spanish ships encountered, as they sailed from Spain to the Caribbean, was how a change in temperature affected the wooden construction of the vessels. As the ships sailed from the cooler temperate climes of Europe to the tropical heat of the Caribbean, the tar used between the ships' planks, became sticky and melted. This created a dangerous situation for the sea vessels as sea water began seeping into the ship. To rectify the situation or at least control it until the ship reached a port in the Caribbean, it was necessary to continuously re-caulk seams throughout the ship.

Other Materials

There were other materials needed in the construction of a galleon which included the hundreds of wooden pulleys used for rigging. The wooden pulleys were most probably produced at Cavite by Filipino and Chinese carpenters. As wood was plentiful, these items would have been easily produced by them. All the interior sections of the

ship, such as the woodwork used in the cabins and other fittings, were also produced at Cavite.

Tools Used in the Construction of the Galleons

At the Spanish shipyards a number of tools were used in the construction of the sea vessels. These included a variety of hammers of assorted sizes, as well as levelers, adzes, lathes, axes, pliers, hatchets, saws, chisels of various sizes, caulking irons, augers, mallets, and hooks. According to the Spanish royal ordinances of 1607 and 1618, the shipyard workers in Spain, had to provide their own tools. However, at Cavite, we can presume that the Spaniards provided the workers with all of the tools they needed to build the sea vessels. It seems unlikely that Filipinos and Chinese, who were working on farms or in shops one day, suddenly found themselves on the next day employed at the shipyard, would have had the sort of tools used to construct sea vessels. Most of the tools would have been made by the master blacksmiths in the foundry at the Cavite shipyard or brought in from Mexico.

Sea or Ship Worms and Damage to Wooden Vessels

One of the major problems faced by wooden vessels was the damaging effects caused to them by sea worms or ship worms. One species of the worm, known as the “Teredo navalis,” was not actually a worm, but a type of marine bivalve mollusks or very small salt water clams. The mollusks attached themselves to the ship’s hull, boring into them and destroying the wooden frame of the ship. They were sometimes referred to as the, “Termites of the Sea” for their destructive capabilities to severely damage the hulls of vessels. The sea worms were particularly virulent in the waters of the Caribbean where the galleons sailed to every year from Spain.

Shipwrights in Spain attempted to fortify their vessels by adding lead sheets over the wooden planks of the hull in order to prevent the boring activities of the sea worms. The wooden hull area below the water line was covered in a thin layer of lead sheets as discussed earlier. The outer planking was covered in canvas, which in turn, was smeared over in tar or grease in an attempt to protect the hull from being destroyed by sea worms. In the Philippines, the situation was a bit different. As the country had a number of tropical hardwoods, which sea worms were unable to bore into, one could say that the vessels constructed in the Philippines were more durable than those produced in Spain and in the Americas. The Philippine built vessels were stronger and able to stay afloat for longer periods of time due to the strength of the tropical hardwoods the shipwrights used in their construction. Nevertheless, the shipwrights still applied thin sheets of tin or lead sheathing to the hulls of the vessels they constructed as an

extra precaution against damaging sea worms. One of the lead sheathing plates was discovered by archaeologists when the *San Diego* galleon was excavated in the Philippines in the 1990s. It is now on display at the National Museum of the Philippines in Manila.

Building the Galleon

The entire process of building a galleon could take as long as two years. At the Cavite shipyard, the master shipwrights were kept busy building both galleons for ocean voyages and galleys for use in inter-island trade. The procedures involved in the construction of the galleons followed the building methods established in Spain. The first thing the shipwrights did was to lay the keel for the vessel.

When constructing a galleon, the shipwrights used five major measurements to determine the size of a ship they were about to construct. These consisted of the length of the vessel (esloria); the length of the keel (quilla); the width of the main beam (manga); the depth of the hull (puntal), and the width of the deck. In a 400 ton vessel, the height of the ship from the keel to the manga (breadth of the beam), was 33 feet, while the width across the manga from port to starboard was 29 feet across. The length of the keel, the width of the manga at its widest point across from its port to starboard side, and the height of the manga to the ship's keel, determined the tonnage of the vessel.

In the Philippines, shipbuilders would have followed the same construction practices, which had been established in Spain and followed in its shipyards in Havana, Acapulco and in Cartagena. At the shipyards and at the port of Cavite, shipwrights were already constructing a number of sea vessels, but as the port area and its daily activities could not be supervised by the viceroy in Mexico City or the king in Spain, we can assume that some liberties were taken when organizing the construction, manning and provisioning of the galleons. But what the shipwrights could not take liberties with was neglecting to follow the precise measurements required to build the galleon itself.

The Keel (Quilla), the Stem Post (Roda), and the Stern Post (Codaste)

After the shipwright sourced the timber required to build a galleon, the vessel's keel was placed on the ground and held in place with blocks and support poles. Braces were also positioned underneath the keel to hold it in place during the construction process. Additional braces were added during the construction of the vessel. The keel was usually composed of several beams of wood bolted together and measured as long as 100 feet in length or more depending on the size of the ship required.

After the keel was laid, the stem post and stern post were added to the keel. The stem post was a large section of wood bolted to the front end of the keel at the bow. The stem post curved upwards, while the stern post placed at the back end (aft) of the ship at the keel, was angled outward from the vessel. The government's mathematical measurements of 1580 onwards indicated the exact measurements for the size and positioning of the stem post and the stern post. In 1618, the government stated that the curved stem post had to extend further out from the keel than the stern post. The stern post was connected to the keel by strong knees and braces.

The Keelson (Sobrequilla), the Frame (Skeleton of the Ship), Ribs (Cuadernas), Wooden Planks and the Manga Measurements of the Breadth of the Beam

While the keel could be used to determine the size of the ship, it was the breadth of the beam which was normally used to determine the actual size of the vessel. The breadth of the beam (manga) was the measurement of the widest area of the ship from port to starboard of the vessel. The manga usually measured about 35 feet across. The frame was built up by bolting ground timbers to the keel. The major ribs gave the vessel a "V" or a "U" shape from the top gunwale (cinta), which was the top edge of the vessel's sides. To secure the ground timbers, a keelson (a second keel or sobrequilla), was added on top of the original keel to hold the ground timbers in place. Ribs (cuadernas) were added to the ground timbers building the ship upwards. The ribs were made of naturally occurring curved pieces of wood joined together. The ribs which were first added were known as the major ribs (cuadernas maestres). A ship of 77 feet in length required at least 33 ribs.

After the framework was completed, planking the ship could begin. The wooden planks of about 5 inches thick were laid side by side and nailed in place using wooden treenails (cabillas or pegs) and iron spikes. To give planks a curved shape the carpenters used steam to bend the wood to the desired shape. The planks used for the hull were of graduated thicknesses – from very thick towards the keel to less thick towards the top of the gunwale or outer edge of the sides of the vessel.

The Decks

To construct the decks, wooden beams were laid across the ship and connected from the rib on one side of the vessel to its corresponding rib on the other side. Individual wooden beams of about 1 ½ feet squared were set in place to hold the deck above them. The ribs and beams were held in place with knees (braces). All of the timber used in the construction of the vessel had to be substantial in order to

ensure the framework's stability and the seaworthiness of the vessel. A typical galleon normally had three decks with superstructures located at the stern and bow of the ship. The number of decks located in a vessel depended on its size and purpose. At the bottom of the ship, above the keel and ballast, was the hold (bodega) where the majority of the cargo and provisions was kept. Above the hold was the lower deck (primera cubierta) where additional cargo, supplies and equipment such as cables, ropes and extra sails were stowed. The deck above the lower deck was the gun deck where the cannons were positioned in front of the gun ports. Above the gun deck was the upper deck (cubierta alta), and the stern and fore castles.

By the mid-sixteenth century, Spanish shipbuilders began constructing vessels with ever larger superstructures. This added feature enabled the ship to carry larger amounts of cargo, as well as more passengers. Needless to say, this also meant that many ships were top heavy and in danger of capsizing during severe storms as the vessel became unstable and difficult to maneuver. As a result of these concerns, the House of Trade instructed the shipbuilders not to build overly exaggerated superstructures and to add only what was absolutely necessary.

It was difficult for the House of Trade to regulate the construction of the structures. "Obviously greed for rental fees was detrimental to the defensive capacity of the vessels and even to their fitness to sail since excess weight in the superstructures robbed the ships of much of their stability. The inspectors from the House of Trade regularly ordered the dismantling of many of the chambers, but once the inspectors left the ship the ships' carpenter raided the chambers again rendering the inspection useless. One of the inspectors reported that the nao *San Vicente* which belonged to the Tierra Firme fleet of 1582, ignored orders to remove the harpings and the chambers. Just after leaving the sandbar at Sanlucar (in Spain near Cadiz) with the wind only a little stronger than normal, it began to roll dangerously; this forced the crew to throw the superfluous weight into the water. As the ship sailed away, it left behind a wake of wooden chicken coops, beds and pieces of paneling from the chambers built for the passengers." [69]

Launching the Vessel

After the framework was completed and the decks constructed inside of the hull, the rest of the building process was conducted while the ship was afloat i.e., the masts, rigging, yards and sails and anchors were added, as well as any other equipment, which was required on the vessel. The ship was launched into the water by building a cradle underneath the keel. Added supports held the ship upright. Sailors aboard barges used cables and capstans aboard their vessels to pull the ship into the water along a well greased path before it.

Adding the Masts, Yards, Rigging, Shrouds and Sails

When the ship was afloat the masts (also known as spars) were lowered into place within the ship. The ship's masts consisted of the mainmast (at the center of the ship – the tallest one on the vessel), the foremast (at the bow of the ship), the mizzenmast (at the stern), and the bowsprit (a pole angled outward from the ship at the front of the vessel). A space known as support steps were positioned for the mainmast, foremast and the mizzen mast inside of the vessel. The mainmast step was cut into the keel into which the mainmast was lowered and supported. The mainmast was formed by bolting three poles or spars one atop the other. The three spars were called the mainmast, top mainmast and topgallant mainmast. Next, the foremast was lowered into the foremast step located on the fore part of the keel. The mizzenmast was located at the stern of the ship and lowered onto the lower deck into the mizzenmast step. Shrouds consisted of standing rigging of rope lines and secured the various masts in place. They were tied to the masts and held in place along a ledge located on the ship's outer hull away from the gunwale or upper edge of the ship's sides. Rat lines ran horizontally across the shrouds and these were used like ladders by the crew when they had to climb to the yards to lower the sails.

After the masts were installed, the yards (horizontal spars from which the sails were hung), could be set across the masts for the running rigging (ropes used to control the sails), sails and hundreds of wooden block and tackle pulleys which were used to control the raising and lowering of the sails. Each yard has its corresponding name such as the mainsail yard, main topsail yard, and main topgallant sail yard. A fourth sail, the topgallant, could be added to the main and foremast and this was a smaller sized sail than those used for the fore, main and mizzen sails.

The mainmast sails are known as the mainmast mainsail, mainmast topsail, and mainmast topgallant sail. The foresail sails are the foremast sail, foremast topsail, and foremast topgallant sail. The mizzen mast carried two sails; the mizzen mast sail and the lateen sail, which was a triangular sail. The bowsprit carried two sails; the spritsail and the spritsail topsail. Each sail was hung from its corresponding yard (halyard) or horizontal pole. For example the mainmast topsail hung from the mainmast topsail halyard.

Ship's Anchors

The galleon usually carried at least four or more anchors. They were hoisted onto the sides of the vessel by heavy anchor cables. The cables were wound around a capstan, which were operated by the sailors when the anchors were lowered or hauled up from the sea bed. Anchors ranged in weight depending on the tonnage of the vessel. For

vessels of 200 to 400 tons, they could weigh as much as 1,102 pounds to 1,543 pounds per anchor.

When the *San Diego* galleon was excavated by archaeologists in the Philippines, it was found to have had two anchors which were both recovered. "Both of these were heavily covered with coral encrustations. On the basis of rusted iron flakes it can be inferred that the anchors were manufactured by a forging process as opposed to a casting process. During the forging process, bundles of iron bars or rods for the anchor are fastened together by iron brackets and subjected to a furnace. "[70]

The Rudder, Tiller (Cana) and Whipstaff (Pinzote)

When the ship was prepared for a voyage the last item to be added to the galleon was the rudder. The galleons were steered using a rudder which was controlled by a helmsman positioned in the stern castle under the bridge. The chief pilot on the bridge instructed the helmsman in which direction to move the whipstaff (pinzote). The helmsman could only move the whipstaff to the right or to the left and this motion along with the winds and the sails allowed the vessel its maneuverability. The whipstaff was connected to a tiller (cana) and this, in turn, was attached to the rudder. By the end of the eighteenth century, the whipstaff was replaced by a wheel which was connected to the rudder by ropes or chains. In the sixteenth and seventeenth centuries, the rudder was hung onto the stern post using iron pintles and gudgeons. The rudder's iron pintles were slotted into the iron holders (gudgeons) located on the hull's stern post. In the *San Diego* galleon excavation it was found that part of the rudder was still extant and in good condition. It was still connected to the hull after centuries under the sea through the use of the iron pintles and gudgeons.

Other Components of the Vessel

The other components of the vessel included the bulkheads, two capstans, the small ship's boat, ladders, extra spars (wooden poles) and sails, cooking stove and cooking pots/kettles/utensils/plates, kegs, vats, tubs, flags, hour glass, ship's bell, ship's lantern, food provisions and water, additional equipment such as carpentry tools and caulking materials, as well as artillery including powder, cannons, cannonballs and grapeshot. The navigational implements were taken aboard the vessel by the chief pilot such as the astrolabe, but the ship's compass was housed in a wooden case (the binnacle), which was located in front of the helmsman's position on the vessel.

The bilge was located at the very bottom of the ship where the ballast of rocks, stones and sand was placed. Just above this area was the large open space known as the hold (bodega). Most of the ship's cargo was placed in here although in the Manila galleons cargo could

be found throughout the ship wherever there was an available space. Many of the ship's heaviest items such as barrels, bullion and the one thousand large Chinese earthenware water jars, which were normally carried on each voyage from Manila to Acapulco, were stowed in the hold and acted as additional ballast. As water was consumed during the voyage, sea water was poured into the jars and they were replaced in the hold to maintain the ship's balance.

To maintain the ship's integrity, it was necessary to have a number of pumps in continuous operation throughout the journey. They were used to pump out the water that accumulated in the bilge, where the ballast was located, from leaks and seepage during the voyage. Two or three wooden bilge pumps were used in the galleons and were later replaced by metal ones. They could be operated from the gun deck. The Spanish inventor of the metal pumps was Diego Ribero. They were deemed more efficient than the wooden pumps and were lighter in weight. Metal pumps were in use from 1533 onwards. When used on a 100 to 120 ton ship, they weighed from 300 to 400 pounds. However, the older wooden pumps continued to be used as they were cheaper than the metal ones.

Careening and Repairing the Vessels

One of the major difficulties the Spaniards encountered during the years of the Atlantic trade run was the fact that older, deteriorating ships were often employed as merchant vessels. Even though the government established a number of regulations to control the vessels that were sailing annually to the Americas, it was not unusual for Spaniards to use ships which had seen better days. By 1557, the House of Trade was concerned about the continued use of the older vessels, as they were aware that the ships were in a deplorable condition. The older ships had long been used as trade vessels in Europe, and when they were no longer required, they were sold to merchants for the Atlantic convoys. Many of the vessels were abandoned in the Americas once they arrived there.

They also stated that they would not approve any ship for the Atlantic convoy that was more than two years old, and no vessels could be abandoned in the colonies without special permission from the government. The ruling was amended in 1584, when the House of Trade stated that a vessel could remain in the Americas if the captain general of the fleet gave his permission along with the testimony of the chief pilot and the ship's master, that the vessel had to be abandoned in the Americas. If this was the case, parts of the abandoned vessel were re-used to reinforce the hulls of other ships which were travelling to Spain from the colonies. The crews, weaponry and other equipment were also taken from the vessel and transferred to other ships.

The Spanish government passed several regulations in 1534 concerning the careening of older vessels for the Indies trade run. The regulations stated that older vessels were no longer permitted in the convoys until they had been completely repaired, careened and caulked. After completing the careening process, they were then required to undergo an inspection conducted by officials of the House of Trade. They had to pass the inspection in order to receive the House of Trade's permission to join the convoy. As mariners objected to the ruling, the House of Trade momentarily suspended the regulation.

When a sea vessel was to be careened in sixteenth century Spain, it was not unusual for the process to take place along a river bank or a beach. For example, ships were careened along the Guadalquivir River, which flowed pass Seville towards Cadiz. Another area which was also used was Sanlucar, on Spain's Atlantic coast. This particular careening spot eventually evolved into a shipyard for this purpose. When a ship was being careened, the shipwrights instructed the workers to pull the ship onto the beach where it was laid on its side. After one side of the vessel was cleaned and repaired, the vessel was turned over onto its other side and the process was repeated. Obviously this could only be done if the vessel was a smaller one. As they became larger in the seventeenth and eighteenth centuries, it would have been difficult to careen vessels in this manner. By then, it was becoming the norm to abandon very badly damaged vessels, rather than trying to careen them. When dry docks came into use, the process of careening the ships became much easier to conduct.

The actual techniques employed when careening a vessel for the Atlantic convoys, appeared to be a messy, cumbersome process. The Spaniards cleaned their ships by first removing the tar on the hulls of the vessels. The old caulking materials were also removed and replaced. A fresh layer of cloth soaked in alquitran, which was a bitumen tar-like substance derived from petroleum and plant resins, was applied to the hull from the water line down to the keel. To protect the vessel from sea worms, another layer was added to the hull and this was composed of lead sheathing, which was nailed over the alquitran covered cloths. In the Philippines, on the other hand, the sea vessels were careened using a similar method to the above, but they cleaned the hull using a combination of Chinese oil and lime. These two ingredients combined into a rough, scrubbing mixture that scoured the hull and removed any sea worms, barnacles and other organisms attached to the hull from the water line down to the keel.

As an example of the careening processes used at Cavite, Le Gentil provided a description of how vessels were handled at the shipyard. He said that the *Santa Rosa* galleon was sent to Manila from the

Americas to serve in the Manila-Acapulco trade run. At the same time, another galleon the *San Carlos* arrived in Cavite in 1766, and was being prepared to sail to Acapulco when the *Santa Rosa* came into port from Mexico. The *Santa Rosa* was in a terrible state and had to be fully careened before she was able to make the return journey to Acapulco. The vessel was constructed thirty years earlier in Peru and had been involved in the coastal trade in the Americas for many years. Le Gentil mentioned that the ship was actually a smaller vessel than the galleons used in the transpacific trade run.

The *Santa Rosa* was the first vessel used in an attempt to re-start the galleon trade run after the war with the British invasion of the Philippines from 1762 to 1764. After the British capture and occupation of Manila, the Spanish found that the British took all of the vessels they found anchored at the port of Cavite with them to India. As a result, the Spanish colony was left without any vessels they could use. As Le Gentil wrote about the events occurring at the time which concerned the *Santa Rosa* galleon, he said,

"The *Santa Rosa* carried (Captain) Senor de la Condamine on one of his voyages along the coast of America. After the capture of Manila by the British, the king ordered the *Santa Rosa* to transport the viceroy to the Philippines where he was to retake possession of the country from the invaders. As the Manilans were unable to continue their commerce because they had no ships or timber in proper condition for the building of one the *Santa Rosa* was put into the trade until such time as other galleons could be constructed. That ship, in 1766, had just returned after her first round trip, but she was not in proper condition to undertake a second journey. According to the opinion of the Manila shipbuilders, she needed an overhauling which would cost at least 40,000 pesos in order to put her into a sufficiently seaworthy condition to enable her to make even one trip, for it was proposed to condemn her upon her return."

"I arrived in Manila just at this time. Captain De Caseins was not expected and his arrival caused a great deal of surprise. Captain de Caseins had been in the Philippines before and was familiar with the country and was furthermore a zealous and conscientious servant of the king. When he heard of the expenditure of 40,000 pesos, he expressed astonishment and insisted it was impossible. The governor an astute and crafty man did not say a word. On October 23, 1766, Caseins together with Jose de Cordova and his officers made an inspection of the ship. They were accompanied by the attorney general and the accountant whom the governor expressly appointed to make the inspection. Caseins, a good friend of mine, took me with him. I was a witness to the careful attention with which Caseins made his examination, which lasted nearly two days. He then returned to

Manila more firmly convinced that any work done for the king in Manila would cost him extremely dear. He told the governor that for 10,000 pesos he would undertake to put the *Santa Rosa* into such condition to be fit to make at least one trip."

"The governor did not oppose as he knew that Caseins would report back to the king. The governor said that Caseins could save the king a lot of money. I was deceived by this and so was Caseins. Believing that the governor was acting without ulterior design Caseins took charge of overhauling the *Santa Rosa* with his carpenters and the energetic Senor de Cordova who superintended everything and commenced to strip the vessel and do the work. There is no lack of shipbuilders in Manila. The work of docking and overhauling the vessels is admirably done there. Caseins often complained to the governor about the hostility encountered in the port of Cavite but notwithstanding this hostility, Caseins and Cordova succeeded in doing the work."

"Early in February 1767, the *Santa Rosa* was ready to take on her tackle, apparel and so forth. Caseins in a letter to the governor assured him that the *Santa Rosa* was in good condition and that the work had been accomplished with an expenditure of not more than 8 or 9,000 pesos, instead of 40,000. Caseins was satisfied with his work and left Manila on February 12, 1767. Fifteen days later after the departure of Caseins I called on the governor and was astonished to hear him say that he had signed an order directing that the *Santa Rosa* be inspected. The committee appointed was composed of the attorney general and the accountant, the general of the galleon and a navigator. These were the people who were authorized to pass upon the work of those experienced officers, Caseins and Cordova. This seemed to me unheard of and so extraordinary that I could hardly believe it. "[71]

Apparently, Le Gentil received word from the attorney general that it was necessary to conduct an inspection of the *Santa Rosa* in order to determine if it was seaworthy. Le Gentil asked for permission to join the inspection party and went to Cavite with them. When they arrived at Cavite and went aboard the vessel, they criticized all of Caseins' work. They looked at a number of planks and beams which they claimed were still in poor condition even after the repairs had been made to the vessel.

Finally, a report was produced and signed by the inspectors. They reported that Caseins' work on the ship was a waste of time. Le Gentil met with the governor who stated that Caseins had created a major dilemma in Manila. The day after the report was submitted to the governor the inspectors ordered that the ship had to be re-careened anew, undoing all of Caseins' work. The ship was caulked and the main deck was raised higher to allow for greater storage space. As a result of the additional work on the vessel, instead of costing the

government 9,000 pesos the work turned into a 50,000 peso expenditure.

According to some Spaniards in Manila, this sort of thing was typical of what went on in the capital. When Le Gentil sailed from Manila and arrived in Pondicherry, India, he wrote to Caseins who was then in Cadiz. In the letter, he explained the events that took place in Manila and at Cavite after he had left the colony. Unfortunately, Caseins never had a chance to read the letter as he died in Spain before the letter arrived.

In the Philippines, even though much time and effort went into building a galleon and it was an expensive undertaking, the ship often sat idle in port for many months at the Cavite shipyard. Returning vessels from Mexico also faced the same destiny. They would be left to the mercy of the elements – neglected and slowly eroding under the hot tropical sun or from the aftereffects of torrential rains. After a year's absence in Mexico, the returning galleon was stripped and left abandoned from July to February. Little attention was paid to its upkeep until it was needed once again. Then there would be a mad scramble to bring the vessel back to its seaworthy condition.

In some cases, when vessels were constructed at the Cavite shipyard, they were not always seaworthy. Mistakes were made in the construction of the ships and the exact measurements were not always followed when building the vessel. This led to much time wasted in making repairs and adjustments in order to ensure that the vessel was able to sail from Manila to Acapulco. In 1766, Le Gentil wrote of the problems surrounding the *San Carlos* galleon, which was built but unable to sail and required many adjustments before it was able to embark from Cavite.

"The *San Carlos*, which had just been built, as I have related, was about to sail when I arrived in Manila. This was to be her first trip. Superficially she made a good showing, but as a matter of fact she was not in seaworthy condition. An effort had been made to start the voyage, but she had been obliged to put back, for the people on board were afraid that she might go to the bottom of the sea, as she could not carry her sails; and no one in Manila knew what to do. Fortunately, Senor de Caseins arrived. A committee of merchants at once came on board the ship to ask him to make an inspection of the *San Carlos* and to remedy if possible her defects. As her departure was urgent, men were set to work at once to unload the vessel. Senor de Caseins expressed the opinion that the difficulties which the ship had encountered were not due, as the Manilans believed, to bad stowage of the cargo; but that the fault was to be found in her superstructure, which was too heavy and too high. Her stern castle, particularly, was enormous – with that great stern structure she looked like a 64 gun

warship at least. Senor de Caseins had the stern castle pulled down and left the vessel flat, like a frigate. The time was short and so Senor de Caseins carried on the work with the utmost energy, efficiently seconded by Don Jose de Cordova, who was in every respect an excellent officer. Finally, on August 20, the frigate *San Carlos*, which except for Senor de Caseins would never have left the bay, was ready for sea. Senor de Caseins gave her a trial trip in the bay and kept her tacking for two days. It was evident that she was in condition to make the voyage to Mexico, and she sailed on the 23rd. She made the trip successfully and proved herself to be a good sea boat. ”

“The result of this experience was that the merchants insisted upon making changes which put the ship back into practically the same condition she was in before Senor de Caseins had torn away her superfluous superstructure – that is to say, they rebuilt a big stern castle, for no doubt the Manilans did not consider her passenger accommodations sufficiently comfortable as Senior de Caseins had left her. Fray Esteban Roxas y Melo wrote to me at Pondicherry that his galleon had been unable to make her voyage; that she encountered some bad weather in the open South Sea; and that it was found impossible to navigate her. She swung around into the wind so as to lie with her prow forward, like a ship at anchor. They were obliged to cut away not only her mizzenmast, but also her main mast. ”[72]

Naming the Vessels

The names the Spaniards gave to the galleons were usually associated with Christianity. They chose the names of the saints (Santos Catolicos), places of religious significance, religious beliefs and even the name of the ruling monarch in Spain when naming a vessel. When the ships were named after renowned individuals of religious significance, they sometimes chose the name of Virgin Mary or the Madonna. They could also be named for the saint of a particular religious order such as the Franciscans, the Augustinians or the Dominicans. By naming the vessel after a religious figure, the individuals aboard the ship hoped that the vessel was protected by the holy figure throughout its journey.

As a sea journey was considered a terrifying experience, many individuals who traveled aboard the galleons, never knew if they were going to survive the journey. As far as they were concerned, the ship was controlled by the forces of nature and a deadly storm could easily sink the vessel. If the ship survived the hardships of a storm, it was still at risk as pirates and privateers were always lying in wait in waters where the galleons sailed. If they attacked the vessel, a battle often left many dead on the ship and the cargo seized by the enemy. The journey across vast ocean miles was fret with uncertainty, and for this reason the individuals who boarded a galleon hoped that the

patron saint or holy figure for which their vessel was named would bring them safely to their destination.

As a consequence of naming the vessels for religious figures, it was not uncommon to have many ships with the same name. This, of course, could be confusing when trying to keep track of the various vessels journeying to the Americas or to Manila. In the Philippines, the galleons were given names such as the *San Juan*, *San Pablo*, the *Espiritu Santo*, the *San Santiago*, the *Santa Ana*, the *San Agustin,* and the *San Felipe*. When the ship was sold or used for another purpose other than for war or as a merchant vessel it was not uncommon to rename the vessel. This was the case with the *San Diego* galleon. When the merchant vessel was turned into a warship galleon by Dr. Antonio de Morga, as part of his preparations to attack the Dutch in Manila Bay in December 1600, he changed the ship's name from the *San Antonio* to the *San Diego*.

Chapter 7

The Galleon as a Merchant Vessel and Warship

During the sixteenth century, the Spaniards of Manila nonchalantly dismissed the piratical activities they heard about in the Americas. They were under the impression that only vessels in the Caribbean were continuously under attack by enemy vessels and particularly by pirate ships. As far as they were concerned, these types of confrontations did not occur in Asia or along the west coast of the Spanish held possessions in the Americas. The thought of this happening in these areas seemed farfetched and unlikely. As a result, little attention was paid to the possibility that an attack might be launched against one of their Manila-Acapulco galleons.

Given this assumption, the officers of the galleons were unprepared for any eventuality including an attack by an adversary. While they carried weapons such as cannons, they all too often moved the heavy artillery to the ship's hold in order to create additional space on the decks for cargo. This was the case with the two eighteenth century galleons: the *Nuestra Senora de la Covadonga* and the *Nuestra Senora de la Santisima Trinidad*. In both instances, the galleons were attacked in the Philippines by British vessels, and the majority of their cannons had been stowed away in the hold. The lack of preparedness for an attack, and the fact that the cannons on both galleons had been placed in storage, enabled the British vessels to easily capture the galleons.

In a similar fashion to the Spaniards, the British, French and Dutch began sending their own vessels on exploratory missions with the intent of conquering new lands and encroaching upon the trade monopolies of the Portuguese and Spaniards. During these voyages, in the sixteenth and seventeenth centuries, they entered the waters and colonies controlled by Portugal and Spain. Their intrusive activities often led to conflicts and attacks against the vessels of both nations in the Atlantic and then in the Pacific. The British and the Dutch attacked and looted Spanish towns in the Caribbean, Mexico, Central and South America and in Asia. Oftentimes, the captains of the European vessels had an ulterior motive which was namely to capture a Spanish treasure ship. Whenever possible, they seized Spanish and Chinese vessels and confiscated the cargoes they carried.

As enemies of Spain, both England and Holland attempted to disrupt Spanish trade in the Americas and in Asia. An example of this sort of disruption was the British invasion and capture of Manila in 1762, during the Seven Year's War, which was fought in Europe, North America and India. The Spanish alliance with Britain's foe,

France, provided the British Admiralty with an excuse to invade the Spanish possessions of Havana and Manila and to disrupt trade in both regions. It was commonly known at the time, that the galleons were transporting vast amounts of wealth to Spain every year. As a result, it was difficult trying to keep the predators away. But while conflicts continued in the Americas, and many ships were captured, this problem had not become the norm on the Pacific side of the Americas.

In fact, the number of galleons, which were captured by foreign ships in the Pacific, was relatively few in comparison to the Atlantic trade run. Four English commanders captured Manila-Acapulco galleons: the *Santa Ana* was captured by Thomas Cavendish in 1587 off the coast of Baja California; the *Nuestra Senora de la Encarnacion Disenganio* by Woodes Rogers in 1709 also along the coast of Baja California; the *Nuestra Senora de la Covadonga* by Commodore George Anson in 1743 in the Philippines at the San Bernardino Strait, and the *Nuestra Senora de la Santisima Trinidad* was captured by Rear Admiral Samuel Cornish's vessels in 1762 near the San Bernardino Strait. Two other galleons were attacked, but not captured by the British, and they included the *Rosario* in 1704 and the *Begona* in 1709. The *Begona* was able to repel an attack by Woodes Rogers and managed to escape.

The Dutch, on the other hand, continuously sent vessels to the Philippines during the first half of the seventeenth century. They arrived in Manila Bay clearly to disrupt trade and possibly capture a galleon. On various occasions they blockaded the San Bernardino Strait and Manila Bay while seizing boats which were attempting to reach the port of Cavite and deliver goods. This led to a confrontation between a Dutch fleet and Spanish vessels including the *San Diego* in Manila Bay in December 1600. During that conflict, the *San Diego* sank.

Initially, the Manila-Acapulco galleons were only lightly armed with hand weapons. This was perhaps due to a lack of artillery or to the perceived notion that an enemy attack was unlikely in the Pacific. In any case, the colony was basically still in its developing stage after having been conquered by Miguel Lopez de Legazpi in 1571. At the time, there may have been a shortage of supplies and equipment in the fledgling colony which also included weaponry. By 1586, there were 713 Spaniards living in the Philippines with 329 of that total residing in Manila. The rest of the Spaniards lived in Cavite, Arevalo, Cebu, Caceres, Segovia, Villa Fernandina and Pangasinan.

After the attack and capture of the *Santa Ana*, the attitude towards arming the merchant vessels changed. From then on, there was a concerted effort to equip the galleons with sufficient levels of artillery to defend themselves against enemy vessels. But this, indirectly led to other difficulties in Manila. Apparently, it was customary to remove

the guns from arriving galleons in order to fortify Manila's defenses. Governor Santiago de Vera (1583-1590), was instrumental in the passage of a law which indicated that a galleon's artillery could not be removed from the vessel and then used in the country's fortifications. He realized that this practice had to end especially as the galleon needed the artillery to defend itself at sea. Moreover, the governor stated in a report that all crew members and passengers aboard a galleon had to be armed if there was any perceived threat to the ship. He noted at the time that the crew and passengers should be armed with harquebuses, swords and pikes, and that the vessels should carry large supplies of gun powder, bombs and grenades.

The weapons which were removed from arriving galleons would have been used to reinforce the defenses of military installations such as the fort in Manila. During the time of Governor de Vera's administration, Manila was only protected by a flimsy wooden fort which burned to the ground in 1583. It was replaced by another equally unsafe wooden structure. Later, in the last decade of the sixteenth century, a new fortification was constructed of massive stone blocks. It was known as Fort Santiago (Fuerza de Santiago named after the patron saint of Spain and the military Apostle James). Although Governor Santiago de Vera ordered the construction of the new fort on August 9, 1589, he was unable to see its completion. The construction of the city's walls and separate military citadel began in 1592 during the administration of Governor Gomez Perez Dasmarinas (1590-1593).

Apparently, the practice of removing the guns from arriving sea vessels had its beginnings in Spain. It was not a new or unique idea. However, in the Philippines carrying out this procedure was impractical and illogical given the threats to the galleons by enemy vessels. In any case, from the sixteenth to the seventeenth centuries, the highly bureaucratic Spanish government kept track of each and every piece of ordnance carried aboard their vessels.

As the weaponry used by the warship galleons in Spain was provided to them by the government, the House of Trade in Seville, kept records of the ordnance which was distributed to the various sea vessels journeying to the Americas. They also maintained warehouses where additional weapons, equipment and supplies were stored. In June and August 1573, the House of Trade, passed a ruling that the arsenal (Altarazanas) was to continuously maintain an additional supply of weaponry consisting of 200 pieces or artillery, 500 pikes, 1,000 half-pikes, 300 lances, 1,500 harquebuses, 200 halberds, 1,500 helmets, 50 pieces of body armor (corselets) and gunpowder. The House of Trade maintained detailed reports of how the ordnance they supplied to the vessels was used and when the vessel returned to port

it had to surrender all of its weaponry and remaining powder stores to the House of Trade for use on other vessels. The captains of the galleons had to provide the House of Trade with a report on how much gunpowder they used during a military campaign including the types of guns employed during these encounters. [73]

When a ship arrived in a port such as Cadiz, the guns on the vessel were unloaded and placed in warehouses. They were later used on other vessels to defend the port city. An official known as the "Mayordomo de la Artilleria," was in charge of maintaining a record of all weapons carried by government ships. The weaponry was also allocated for use on other vessels. The size and purpose of the vessels determined the type of weapons they received from the government, which also determined how many men were assigned to each ship.

By 1608, legislation was passed in Manila which indicated that every galleon sailing from Cavite had to be sufficiently armed with all the necessary artillery and soldiers required for the defense of the vessel. Every member of the crew and passengers were also to receive hand weapons if the ship was attacked. Additional rulings by Governors Fernando Valdes Tamon (1729) and Pedro Manuel de Arandia (1752) stated that the galleons had to be satisfactorily armed in order to defend themselves against attacks. As it was the practice to stow the cannons in the hold during a voyage from Manila to Acapulco, when a vessel was surprised by an enemy ship, there was usually a mad scramble on the ship to prepare for battle using mostly small arms and whatever guns were available for use. The cumbersome and heavy guns placed in the hold could not be moved quickly enough for use in the ship's defense.

Philips described how the ship was defended when it was attacked by an enemy vessel. "During battle the captain of war stationed his men around the ship, with the best ones in the prow, camouflaged by bunting. Other groups had battle stations in the waist, the aft castle, and the poop, each with its own squadron leader (cabo). If there were enough men, one third might be kept in reserve to replace the dead and wounded. With an enemy ship alongside, the soldiers would be arranged in two ranks, one firing from the side of the ship while the other retreated to reload. Half those firing at any given time were to aim at the rigging of the enemy vessel and the other half at the gun ports. Two men would be sent below to help with the artillery, and another two would supervise a detail of soldiers at the powder magazine (panol de polvora), filling flasks and cartridges and delivering them to the mouth of the hatch for whoever needed them. They would also fill containers with salt water … to extinguish fires – if possible, the captain would order sand thrown around the deck, so that grenades and combustible balls heaved by the enemy would not

explode. To prepare for boarding an enemy ship, the captain would name an assault group, one third with harquebuses, one third with lances (chuzos), and one third with sword and shield."[74]

A review of the actual Spanish galleons, which were captured or attacked by English or Dutch vessels, provides an insight into the types of ordnance they carried. They also describe how battles between the Spaniards and their adversaries were fought at sea.

Sir Thomas Cavendish's Capture of the *Santa Ana* Galleon 1587

The first circumnavigator of the world was the well known Spaniard, Juan Sebastian Elcano, who served under Ferdinand Magellan (circumnavigation of the globe from 1519 to 1522). As the commander of the Spanish vessel the *Victoria*, Elcano and eighteen crew members reached Spain on September 6, 1522. Magellan was unable to complete the journey as he was killed by natives on the Philippine island of Mactan. The second individual to circle the globe was the Englishman Sir Francis Drake who completed the journey from 1577 to 1580.

As the third circumnavigator of the globe, Sir Thomas Cavendish was known as "The Navigator." He was born in 1560 at Trimley St. Martin in Suffolk, England. As his family was wealthy, he inherited a fortune which he promptly spent on a luxurious lifestyle. Even though he attended university, he did not receive a degree. Instead, he turned to politics and became a Member of Parliament for Shaftesbury, Dorset in 1584. Hoping to make his fortune, he decided to try his hand as a mariner and purchased a small vessel, the *Elizabeth*. He sailed the vessel as part of Sir Richard Grenville's expedition to Virginia in 1585. The voyage was largely unsuccessful, and he returned to England where he again served in Parliament as a member for Wilton in 1586.

That same year, he decided to venture out once again on the high seas and financed the construction of another vessel the *Desire* of 140 tons. An expedition was organized, and he was accompanied by two other vessels the *Content* of 60 tons and the *Hugh Gallant* of 40 tons. His crew consisted of 123 men. The fleet set out from England on June 27, 1586 and arrived at the Strait of Magellan on January 6, 1587. He passed through the Strait in February 1587 and sailed along the coasts of Chile, Peru and Mexico capturing Spanish vessels and plundering towns and villages. At one point, the *Hugh Gallant* was destroyed by Cavendish as she was in serious need of repairs.

By November 1587, he was sailing near Baja California and he decided to capture the incoming Manila galleon. He waited for its arrival at the Bay of Aquada Segura, Baja California and on November 6, the galleon was spotted approaching the coast. After a six hour battle, he captured the 600 ton *Santa Ana* off the coast of Cabo San

Lucas. He took the cargo on board the galleon and 122,000 pesos in gold. In total, the value of the treasure aboard the vessel amounted to more than two million dollars.

The galleon carried 160 individuals and was under the command of Captain Tomas de Alzola. It had departed from the Philippines in June 1587. When she neared the coasts of California, the captain spotted an approaching vessel and at first he thought it was the galleon *Buena Esperanza*, which was sailing from Acapulco to Macau. He soon realized his mistake as the flags on the vessel clearly identified her as being a British ship. He immediately prepared the *Santa Ana* for an attack and distributed weapons to everyone aboard the galleon. They received harquebuses and swords, as well as rocks to throw at the enemy. Apparently, the galleon's cannons were not used to defend the ship as they were, no doubt, in the hold.

When Cavendish spotted the *Santa Ana*, he chased after her. According to Francis Pretty who was a crew member with Cavendish, he later wrote of the incident saying, "We gave them chase some three or four hours, standing with our best advantage and working for the wind. In the afternoon we got up unto them, giving them a broadside with our great ordnance and a volley of small shot, and presently laid the ship aboard, whereof the king of Spain was owner, called the *Santa Ana* and thought to be 700 tons in burthen. As we were ready on their shipside to enter her, being not past 50 or 60 men at the uttermost, we perceived that the captain had made fights fore and after, and having not one man to be seen, stood with lances, javelins, rapiers and targets and an innumerable sort of great stones, which they threw overboard upon our heads. Being so many of them, they put us off the ship again, with the loss of two of our men which were slain, and with the hurting of four or five. We trimmed our sails and gave them a fresh encounter with our great ordnance and also with our small shot, raking them through and through, killing and maiming many of their men."

" Their captain still like a valiant man with his company stood very stoutly not yielding as yet; our general encouraging his men afresh with the whole noise of trumpets gave them the third encounter with our great ordnance. They being thus discomforted and spoiled, and their ship being in hazard of sinking by reason of the great shot, whereof some were under water, within five or six hours fight set out a flag of truce, desiring our general to save their lives and to take their goods, and that they would presently yield. Our general out of his goodness promised them mercy, and willed them to strike their sails; and to hoist out their boat and to come aboard: one of their chief merchants came aboard unto our general: and falling down upon his knees, offered to have kissed our general's feet, and craved mercy. The

general out of his great humanity promised their lives and good usage. The said pilot and captain presently certified to the general what goods they had within, to wit 122,000 pesos of gold: with silks, satins, damasks, with musk and diverse other merchandise and great store of all manner of victuals with the choice of many conserves to eat and of sundry sorts of very good wines. On the sixth day of November following, we went into a harbor which is called by the Spaniards, Puerto Seguro."[75]

During the battle between Cavendish's men and the Spaniards, they had come along side the Spanish galleon and a hand to hand battle ensued. The English cannons shot holes into the galleon's hull below the water line causing the vessel to slowly begin sinking. As an aside, the fact that the hull was damaged by cannon fire may indicate that the vessel was constructed in the Americas and not in the Philippines. As the ships which were constructed in the Philippines of tropical hardwoods had almost indestructible hulls and sides, it seems likely that the *Santa Ana* was built of less durable woods.

As the *Desire* came along side the *Santa Ana*, she rammed into the galleon. Now that the vessels were side by side, English crew members jumped onto the galleon fighting all the while. During the battle, which lasted for six hours, the Englishmen cut down the galleon's main mast and sails. As the galleon appeared to be sinking, Captain Alzola decided to surrender to Cavendish. The Spanish commander dispatched one of his officers, Pedro Bravo de Paredes, to Cavendish's flagship in order to negotiate the terms of surrender. Meanwhile, Cavendish had already sent his own officers to the galleon to arrest Captain Alzola and other Spanish dignitaries on the vessel. The following day the *Santa Ana* was taken closer to the shore by Cavendish and his men. The galleon's passengers and crew members were put ashore. Many of the passengers included women and children, and the crew was mainly composed of Filipino men. Included in the group, which was released on shore, was a group of thirty prisoners Cavendish had captured during his exploits in South American waters.

Cavendish was not a totally heartless man. He provided the released persons with fresh water and provisions which included fish, hares, garbanzos, peas and even wine. Additionally, he gave them wood and weaponry with which to defend themselves against possible attacks by Indians located on the Californian coasts. Moreover, he gave them the sails from the galleon so that they could use them to set up tents on the beach, as well as wooden planks which could be used to construct a small boat.

Before leaving the area, Cavendish turned over to Captain Alzola the galleon's register which he had in his possession. He had kindly

indicated to the captain that the items of cargo he retained as booty had been ticked off on the register. The total value of the galleon's cargo amounted to over 2.1 million pesos in value in cash and cargo of gold, silk, damask, satins, pearls, musk and civet essences used in the manufacture of perfumes in Europe and other exports from Asia. This included the 122,000 pesos in gold. When Cavendish opened the chest containing the gold he exclaimed, "Now we are rich for in the two years that we have been going we have found nothing like this." In addition to the cargo listed on the register, it was known at the time that the *Santa Ana* was also carrying cargo which was unregistered including gold. The crew helped themselves to the cargo taking the finer silk fabrics, while the remainder was thrown overboard or allowed to burn in the ship. The portion of the cargo Cavendish decided to keep was transferred to his two ships the *Desire* and the *Content.* This included food stores such as fruit conserves and wines which were surprisingly still remaining on the galleon after so many months at sea. The seized cargo was divided amongst the officers and crew members. "Then we fell to hoisting in our goods, sharing of the treasure, and allotting to every man his portion. "[76]

In addition to the booty he took from the galleon, Cavendish retained several slaves from the galleon and put them to work on his vessels manning the pumps. He also took on board three Filipino boys and two Japanese brothers, who may have been Christian converts from Manila as they were named Cristobal and Cosme. In addition to these individuals, Cavendish kept two of the Spanish pilots from the *Santa Ana*: Alonzo de Villadolid (along with his 19 year old slave from the Philippine island of Panay), and the other pilot Sebastian Rodrigues Cermeno. He already had another Spanish pilot, Miguel Sanchez, who was captured along the South American coast when he seized a vessel there.

After putting the passengers and crew members of the galleon on shore, he beached the vessel and set it afire. One of the Spaniards he put ashore was Sebastian Vizcaino who was later to become a renowned navigator and the explorer of the coasts of California. As a passenger on the *Santa Ana*, he was returning to Mexico from Manila. He had personally invested a substantial amount of money in the cargo contained in the galleon, which he planned to sell in Acapulco when he arrived there. After the passengers and crew members of the *Santa Ana* were stranded on the California coast, Vizcaino was instrumental in their survival. The Spaniards were unsure if a rescue party would be sent to save them from further peril. As the galleon was within reach of the stranded Spaniards, they began putting out the fire to save the ship. By this time, Cavendish was already quite a distance away from the area. The Spaniards then began to repair the

ship and prepared her for re-sailing to Acapulco. Eventually they succeeded and they were able to sail to Acapulco reaching the port on January 7, 1588.

When he captured the *Santa Ana*, Cavendish was only 22 years old. He was described as being a short man with an innate ability to discipline his men. It was obvious that he also enjoyed the better things in life, as he luxuriously decorated his cabin and his bed with a fine damask bed cover.

From the California coast, Cavendish traveled to the islands of the Marianas, the Philippines, Indonesia and the Cape of Good Hope in Africa. “We were sailing unto the isles of Ladrones (Marianas) the rest of November and all December and so forth until the third of January 1588.” [77]

While in the Philippine archipelago, Cavendish caused quite a commotion in Manila as he basically taunted the Spaniards of the capital with his shenanigans. De la Costa wrote of the incident saying how the Spaniards were affected by Cavendish’s exploits in the country. He wrote, “They were much more concerned about the loss of the *Santa Ana*, for many had invested heavily on the voyage. There was much futile grinding of teeth that that fellow Cavendish, a mere youth of twenty-two with two infinitesimal ships, should take it all away from them, and adding insult to injury breeze through the Philippines as coolly as you please, dropping the saucy message that he would return shortly with enough powder to blow up Manila.” [78]

The *Desire* anchored off the island of Capul where he took on fresh provisions. As the *Desire* was filled with the *Santa Ana’s* valuable cargo, Cavendish was reluctant to engage in any conflicts with other vessels and was determined to reach England safe and sound. However, he tried to set fire to the *Santiago* galleon which was then under construction at the Arevalo, Panay shipyard. He sent a small landing party to burn the vessel, but the Spaniards fought them off and they returned to the *Desire*.

The *Santiago* galleon later successfully sailed to Acapulco in June 1588. The commander of the *Santiago*, Captain General Manuel Lorenzo de Lemos, carried a letter he addressed to Philip II in which he explained his encounter with the Englishmen and how he protected the galleon when they tried to burn the vessel. He said that, “Some time ago the president of the Royal Audiencia sent me to bring the ship which is now leaving for New Spain. With much difficulty I saved it from the danger of the shallows across which it was taken from the yards. While I was serving your Majesty in this capacity the English corsair who robbed the *Santa Ana* last year fell upon me and wished to burn and destroy the galleon which I was taking out. I took my men down to the shore and resisted him and when he left he wrote me a

letter." In the letter written by Cavendish to the Spanish commander, he stated that he planned on returning to the Philippines in a few years in order to destroy their galleons. [79]

Cavendish returned to Plymouth, England in September 1588 aboard the *Desire*. The sister ship the *Content* was lost in transit. The *Desire* was piloted by one of the Spanish pilots Cavendish had taken prisoner, Alonso de Villadolid. When Cavendish arrived in England, he was a wealthy and famous man. His vessel the *Desire* was put on display at Greenwich for would be tourists of the day. Later that same year in 1588, he journeyed on another voyage only to die en route in the South Atlantic in 1592.

***Nuestra Senora de la Encarnacion y Disenganio* 1709**

The English sea captain and privateer, Woodes Rogers, captured the *Nuestra Senora de la Encarnacion y Disenganio* off the coast of Cabo San Lucas, Baja California in 1709. The galleon's accompanying vessel the *Begona*, managed to evade capture even though she sustained damage during an attack launched against her by Rogers. Prior to encountering the galleon, Rogers and his two vessels the *Duke*, a 320 ton frigate with 30 guns and 117 men, and the *Duchess* of 260 tons and 26 guns and 108 men, had been sailing along the coasts of South America looting and ransacking towns, as well as capturing vessels. Rogers was in command of the *Duke*, while the *Duchess* was under the control of Captain Stephen Courtney.

The life history of Woodes Rogers is a fascinating one. He was born into an affluent seafaring family in Bristol, England in 1679. Raised in both Bristol and Poole, he was apprenticed to a sea captain. After his father died in 1707, Rogers gained control of the family's shipping business. During this time period, he became acquainted with the famous Captain William Dampier who was, in his younger days, a pirate and a privateer, but in later life became a respected mariner. Dampier was familiar with the Philippines, as he had arrived in the archipelago during his pirating days in the seventeenth century and lived for a time on Mindanao. As an experienced captain and pilot, he was often called upon for advice by the British Admiralty and other government officials who were planning expeditions to various parts of the world. He was instrumental in the organization of a privateering venture against the Spaniards as the two countries were then at war. Rogers, who was to act as the commander of the two vessels employed in the venture, the *Duke* and the *Duchess*, asked Dampier to join him as the expedition's chief pilot.

The expedition sailed from Bristol in August 1708. Of the crews of the two vessels, there appeared to be an ample number of officers including five captains. Apparently, they were hired by Rogers on purpose to prevent the occurrence of a mutiny aboard either one of

the two vessels. He also thought that if any of the officers died during the three year voyage around the world, that the additional officers could easily replace them. The list of officers on the two vessels prepared by Rogers included the following men:

"Thomas Dover, a doctor of physick, second captain, president of our council, and captain of the marines; Carleton Vanbrugh, merchant, now our owner's agent; Robert Fry, a mariner, chief lieutenant; Charles Pope, second lieutenant; Thomas Glendall, third lieutenant; John Bridge, master; William Dampier, pilot for the South Seas, who had already been three times there and twice round the world; Alexander Vaughan, chief mate; Lanc. Appleby, second mate; John Babet, rated third mate, but design'd surgeon if occasion; he had been Captain Dampier's doctor, in his last unfortunate voyage around the world; Samuel Hopkins, being Dr. Dover's kinsman, and an apothecary, was both an assistant to him, and to act as his lieutenant if we landed a party anywhere under his command during the voyage; George Underhill and John Parker, two young lawyers, design'd to act as midshipmen; John Vigor, a reformado to act as Captain Dover's Ensign when ashore; Benj. Parsons and Howel Knethel, midshipmen; Richard Edwards, Coxswain of the Pinnace, to receive midshipman's pay; James Wasse, surgeon; Charles May, his mate; John Lancy, assistant; Henry Oliphant, gunner with eight men called the gunners' crew; Nath. Scorch, carpenter; John Jones, his mate, with three assistants; John Johnson, Thomas Young, Charles Clovet and John Blowden, all four quarter-masters; John Finch, late wholesale oilman of London, now Steward; Henry Newkirk, sailmaker; Peter Vandenheude, smith and armourer; William Hopkins, ship's corporal, Capt. Dover's sergeant, and cook to the officers; Barth. Burnes, ship's cook." [80]

One third of the crew members were foreigners from various countries. Rogers described them as "tailors, tinkers, peddlers, fiddlers and haymakers." They were obviously not mariners, but according to Rogers they adapted well to a seafaring life.

It was during this expedition that the marooned Alexander Selkirk was rescued from his confinement at Juan Fernandez Island in the South Pacific on February 1, 1709. Selkirk was condemned to a life of loneliness on an uninhabited island in the South Pacific as a result of a dispute between Captains Dampier and Stradling during an earlier expedition in 1704. At the time, Selkirk was viewed as a rabble-rouser and his presence on the vessel was the cause of much tension. He requested that the two captains allow him to stay on one of the deserted islands in the archipelago of Juan Fernandez. He was, at that time, under the impression that another ship was shortly to stop at the island, and that he would be rescued. However, this was not the case

and he remained on the island for four years.

The *Duke* and *Duchess* cruised near Cabo San Lucas and Puerto Seguro in Baja California, where Cavendish had captured the *Santa Ana*. Rogers expected to intercept the galleon as it sailed to Acapulco. He was unaware that two galleons had sailed from Manila that year: the flagship (capitana) *Begona* and the admiral's ship (almiranta) the *Nuestra Senora de la Encarnacion y Desengano*. After cruising in the area for one month, the sails of the two approaching galleons were sighted in the distance as they sailed towards the coast of Baja California.

On December 22, they chased after the *Nuestra Senora de la Encarnacion y Desengano*, and when she was within range of their vessels, instead of preparing for a battle, Rogers ordered that a large kettle of chocolate (considered a special treat), was prepared so that all the crew members could enjoy a hot drink before the beginning of the conflict. Rogers claimed that he did not have any alcohol to offer the members of the crew and the next best thing was hot chocolate. The crew prayed before they prepared to attack the galleon, but they were interrupted by gunfire from the Spaniards. The English rushed to their battle stations and returned fire.

The encounter was a short but fierce gun battle. As the Spaniards fired their stern chase guns, the English used their fore chase guns in reply. The English gave the galleon several broadsides, shooting continuously, but each shot was met with return fire by the Spaniards. As the two ships came closer to each other the English took up their hand weapons. It appeared to the English that the Spaniards were not employing their larger guns (cannons) as fast as they could have done. As they shot at the galleon, their gunfire toppled the ship's flags. The capture of the *Nuestra Senora de la Encarnacion* occurred so quickly and easily as far as the English were concerned.

The galleon's captain was a Frenchman, Jean Presberty, who was formerly an official with a French trade post located in Canton. It was unusual for a Spanish galleon to be commanded by a foreigner. In Spain, this was prohibited, but in Manila as there may have been a shortage of experienced captains for the galleon run, officials located there probably had no choice but to select the Frenchman to command the vessel. Three years later, he was investigated by the Royal Audiencia in Manila on behalf of the king. As he was responsible for the loss of the *Nuestra Senora de la Encarnacion*, he was accused of not being qualified to captain a galleon as he was a foreigner. Furthermore, they stated that he was an inexperienced mariner, navigator and lacked military know-how. As far as the Royal Audiencia was concerned, the loss of the vessel was due to Jean Presberty's lack of experience and also the fact that he never should have been given the appointment in the first place as he was a

foreigner.

The Spanish vessel carried 20 guns and 193 men. During the battle, twenty men on the galleon died while the *Duke* lost nine crew members and another ten were wounded with severe burns caused by powder explosions. During the battle, Rogers was wounded in the face. A musket ball pierced his check and was lodged in his upper jaw. Part of his jaw dropped away and his teeth fell out of his mouth onto the deck. He swallowed a piece of his jaw bone and was in a great deal of pain and could only eat liquefied foods. Even though he was injured and unable to speak, he managed to dictate orders to the crew by writing his instructions out on paper.

In an attempt to seize the second ship the *Begona*, he dispatched the *Duke* and a smaller vessel they had captured and renamed the *Marquis*, to search for the *Begona*. They located the *Begonia* and officers and crew let out a loud cheer of happiness that they had located the vessel. Both the *Marquis* and the *Duchess* began bombarding the galleon with gunfire. From the English vessels, the officers and crew could see that the main deck of the galleon was crowded with officers, sailors and soldiers. In return, the Spaniards defiantly fought back so strongly that the English vessel was severely damaged. She lost her masts and rigging.

The *Begona*, under the command of Captain General Fernando de Angulo, carried a crew of 150 men and passengers who also joined in the defense of the ship. She had a carrying capacity of 900 tons and was equipped with 60 cannons of heavier caliber than those of the English vessels, as well as many brass pedreros (a cannon firing stone balls). As this was her maiden voyage, she was obviously constructed in the Philippines. When she came under attack by the English vessels, 40 of her cannons were already in place and ready to fire. Unlike the *Nuestra Senora de la Encarnacion*, which had most of her heavy guns in the hold and could only defend herself by using smaller guns on the upper deck and hand weapons, the *Begona* was prepared for battle.

The *Marquis*, on the other hand, was only equipped with 18 cannons which proved inadequate to overtake the *Begona*. The English officers of the *Marquis* were worried that if the Spaniards fired at their hull, they would be doomed, as they were accurately firing on the English vessel and meeting their marks. As the two English vessels continued to heavily bombard the galleon, the *Marquis* was beginning to run out of ammunition and had to leave the area to received fresh supplies of ammunition from the *Duke*.

One of the weapons the Spaniards used in the battle against the English vessels was a great quantity of “stinkpots.” When the *Duke* came close to the galleon, the Spaniards began throwing stinkpots onto their vessel. “We kept raking her, fore and aft, and then veered to

get out of the way of the *Duke's* shot, still firing, as did the other ships. The *Duke* was unlucky – for she got so close that the Spaniards were able to throw their stinkpots on board – evil smelling contrivances made of saltpeter, sulphur, asafetida, arsenic, sublimate of mercury, and goodness knows what else. One of them exploded some gunpowder on the quarter deck, causing great havoc, and forcing the *Duke* to withdraw temporarily from the fight. The *Duchess* also had to lie by to stop her leaks and secure her foremast, being much disabled, with 25 casualties on board. The *Marquis* carried on alone and received some stinkpots in her turn, which set part of the ship afire and got onto Captain Cooke's fine clothing."[81]

The Spaniards began putting additional heavy guns into place and it was obvious that they planned to vaporize the *Duke*, the *Duchess* and the *Marquis*, which were apparently no match for the galleon. In order to prevent any Englishmen from boarding the ship, the Spaniards hung strong nets over the sides of the galleon. The Englishmen found it was difficult finding Spanish crew members to shoot at as they managed to remain out of sight. Nevertheless, the galleon did sustain some damage. One mast and rigging was on fire. The *Duke*, on the other hand, sustained damage to her mast which was about to collapse. Of the vessels in the battle, it appeared that the galleon was the least damaged.

The Englishmen soon realized that they could not capture the *Begonia* and, in fact, were in danger of being destroyed by the Spaniards. The Spaniards fought them off so effectively that it was impossible for the English vessels to combat against the formidable galleon's gunfire. They decided to abandon the idea of taking the ship as their own stores of ammunition were running out. The *Marquis* had used up a great deal or ordnance during the conflict.

Ultimately, the English ships had to retreat. Rogers ordered his vessels to sail away from the galleon in defeat. During the battle with the *Begona*, he received another injury. This time, he was shot in the ankle and was unable to stand. They returned to the captured galleon, which was considered a great prize, even though they were disappointed that they could not seize the second vessel. Captain Cooke acknowledged that the Spaniards had put up a good fight and that this was only expected as the galleon had 60 armed guns and was a strong and prodigious ship. Moreover, it carried more than 150 men, while Rogers' three vessels only had a total of 200 men.

After capturing the *Nuestra Senora de la Encarnacion*, Rogers renamed the vessel the *Bachelor*, and sailed her across the Pacific to Guam. When he arrived in Guam, he was welcomed there by the Spanish governor, Juan Antonio Pimentel. This same individual would later be imprisoned by the Spanish government in Manila for assisting

Rogers, and by providing him with provisions he required, as well as entertaining him at a lavish dinner in the governor's house. The meal apparently consisted of sixty courses. In return, Rogers invited the governor and his assistants to come aboard the galleon he had captured. It was probably an interesting and unusual experience for the Spaniards, who no doubt knew that the galleon had been seized from their fellow countrymen off the coast of California. Perhaps the reason why the governor was so courteous to Rogers was out of fear. He may have been afraid that the English pirates might ransack and loot his small island. In any case, Rogers behaved himself and continued on his journey. From Guam he sailed to Batavia (Jakarta) in Indonesia. While he was there, he underwent an operation to remove the musket ball that was still lodged in the roof of his mouth. The operation was successful as he apparently survived the procedure. He decided, while in Batavia, to abandon one of the Spanish vessels he had captured off the coast of South America, as it was badly leaking and in need of extensive repairs.

Rogers circumnavigated the globe returning to England in October 1711. When he arrived in England he was lauded as a national hero and praised for his exploits around the world. After settling down in England, he wrote a book entitled "Cruising Voyage Round the World," which became a best seller. The narrative and its passages concerning the rescue of Selkirk were especially found fascinating by his readers. The author, Daniel Defoe, found the Selkirk story so intriguing that he wrote a book based on his experiences. The book is the classic novel, "Robinson Crusoe."

During his lifetime, Rogers was a sea captain and a privateer, but he eventually settled down to a quieter life as he became older. He was appointed governor of the Bahamas on two occasions. At the age of 53 years old, he died on the island of Nassau on July 16, 1732.

Nuestra Senora de la Covadonga 1743

According to Captain Philip Saumarez, who was on board Commodore George Anson's flagship the *HMS Centurion*, when they encountered the *Nuestra Senora de la* Covadonga in 1743, the Spanish galleon was prepared to defend itself against an attack by the English vessel. Saumarez, a career officer, was initially a lieutenant in 1737, when he served with Commodore Digby Dent in Jamaica. When he returned to England in August 1739, he served as third lieutenant with Captain Charles Knowles, but did not join him when Knowles sailed to the West Indies. Instead, at the age of 32 years old, he joined Commodore George Anson's voyage to the Americas and the East Indies. During the voyage, Saumarez kept a logbook of the events

which occurred during his travels with Commodore Anson in the Caribbean, South America and in Asia from 1740 to 1744.

Commodore George Anson was 45 years old when he captured the *Nuestra Senora de Covadonga*. His was a long and distinguished naval career of great service to the British government. Originally from Staffordshire, he entered the Royal Navy in 1712 and was elevated to the position of lieutenant in 1716 and naval commander in 1722. He commanded numerous naval missions for the Royal Navy which took him to Caribbean and South America. In 1737, he commanded a squadron of vessels which were dispatched by the Royal Navy. During that voyage he sailed aboard the *Centurion*, a 4th Rate ship of the line, with a carrying capacity of 1,005 tons and 60 guns.

The Royal Navy's vessels were classified into six categories according to how many guns they carried. The 1st Rate vessels carried from 90 to 100 guns: 2nd Rate ships carried 64 to 90 guns; 3rd Rate 56 to 70 guns; 4th Rate 38 to 62 guns; 5th Rate 28 to 38 guns, and 6th Rate ships of 4 to 18 guns. The vessels categorized as 1st to 4th Rate warships were employed in the line of battle. As such, they were known as "ships of the line."

The *Centurion* was designed and constructed at the Portsmouth shipyard by the highly experienced shipwright Joseph Allin. He was also involved in the construction of as many as one hundred sea vessels. The warship measured from stem to stern 144 feet in length and was 40 feet in the beam. She was ready for duty on January 6, 1732. Commodore Anson took command of the vessel in 1737 and sailed her on a mission along the coast of Africa and then to Jamaica. He returned to Portsmouth where the ship was refitted for the voyage to the Americas and to Asia.

The expedition embarked from the port of St. Helens, the Isle of Wight, England on September 18, 1740. Commodore Anson's mission was to harass and disrupt Spanish trade and shipping in its colonies in the Americas and in Asia. The initial squadron consisted of eight vessels and 1,939 men. The vessels and their measurements are as follows: *Gloucester*, Captain Richard Norris, 50 guns, carrying capacity 866 tons; *Severn*, Captain Hon. E. Legge, 48 guns, carrying capacity of 683 tons; *Pearle*, Captain Matthew Mitchell, 42 guns, carrying capacity of 559 tons; *Wager*, Captain Dandy Kidd, 24 guns, carrying capacity of 559 tons; *Tryal*, Captain Hon. G. Murray, of a sloop with 8 guns and carrying capacity of 201 tons, and two supply vessels, the *Anna* of 400 tons and the *Industry* of 200 tons.

After sailing for forty days, the vessels arrived at the Portuguese held island of Madeira arriving there on October 28, 1740. They remained in Madeira until November 3, when they sailed to South America. Their first port of call in South America was St. Catherine

Island in Brazil. They arrived there on December 20, 1740 and anchored in the harbor until February 14, 1741. Then they sailed to Patagonia, Argentina and the port of St. Julian where they remained from February 19 to February 27. From there they sailed to South America's Cape Horn. Although the passage around the Horn was extremely difficult, they eventually entered the Pacific. Commodore Anson later said that their success in rounding the Horn was not so much due to the strength of the vessels, but as a result of their own will power to succeed. Almost all the vessels in the squadron managed to reach the Pacific except for the *Severn* and the *Pearle* which found the journey so perilous that they returned to England.

After Anson arrived in the Pacific, one of his other vessels the *Wager*, was shipwrecked off the coast of Chile. Anson now only had five vessels in his squadron: the *Centurion*, *Gloucester*, *Tryal*, and the two supply vessels. As they sailed along the west coast of South America, Anson attacked a number of Spanish towns and seized several sea vessels. They managed to sail to the Juan Fernandez Islands and arrived there by June 11, 1741. While they repaired their vessels and took on fresh water and provisions, they used the islands as a base to launch attacks against Spanish ships. On September 12, 1741, they captured the twenty year old *Nuestra Senora del Monte Carmelo* of 450 tons, which they thereafter referred to as the *Carmelo*. The ship was commanded by Don Emanuel de Lamora and was bound from Peru to Valparaiso. She carried a cargo of blue cloth from Quito, Ecuador, as well as tobacco and silver. As the vessel was their first prize in South American waters, they decided to retain the ship.

They also captured another vessel on September 25, which was sailing from Lima to Valparaiso, the *Santa Maria de Arranzazu*. She carried a cargo of silver objects and sugar. On October 7, they captured the *Santa Teresa de Jesus*, which was sailing to Lima's port of Callao. Although she contained a rich cargo, the Englishmen were disappointed to find that she carried little money. Probably, the best prize of all was the capture of the *Nuestra Senora de Carmen* on November 10, 1741. She contained a valuable cargo of steel, iron, pepper and other spices, cedar, European goods, religious items and snuff.

As Anson decided to return to England, by crossing the Pacific to China and Macau and then via the Indian Ocean and Cape Hope, he had already formulated plan to capture the incoming galleon as it neared Acapulco. When they arrived outside of the Bay of Acapulco on February 13, 1742, they expected to see the galleon still anchored in the bay, but for the rest of February and into March there was no sign of the vessel. In the meantime, they captured two fishermen who divulged that the galleon had already arrived in the port as expected

that January, three weeks before their arrival in Acapulco. A change in plan ensued and they decided to capture the outgoing galleon and waited for it to sail from the port. But by this time, Anson only had two of the original vessels in the squadron: the *Centurion* and the *Gloucester* and several Spanish vessels. Furthermore, through the effects of scurvy and other maladies, as well as losses in conflicts with the Spaniards, he only had 335 men out of the original number of 1,939 he had started out with from England.

Meanwhile, the officials in Acapulco had been alerted of the presence of the English vessels along their coasts, and they had taken precautions to prevent the capture of the outgoing galleon. Acapulco, at that time, had a garrison of 1,200 Spanish and native soldiers with nineteen batteries. As the Englishmen waited for the galleon's departure from the port, they were unaware that the Spaniards were delaying her sailing schedule, as they were fully aware of their presence in the area. Commodore Anson realized that the galleon, if delayed any further from sailing, would face adverse weather conditions in the Pacific, and this would also prevent him from continuing his journey to China and his return to England. As there was no activity to be seen at the port, and he had no intention of attacking and sacking Acapulco, as it was well protected, he decided to sail to China.

However, before sailing across the Pacific, Anson took on water and provisions of rice and flour at the harbor of Chequetan (Sequatenejo), located along the Mexican coast. He knew of the harbor's location from reports made by Sir Francis Drake in 1578 during his circumnavigation of the world. He was also aware of William Dampier's books on his voyages in 1686, which also provided details on the lands he visited including the Americas. Anson arrived at Chequetan by April 6, 1742 and formulated a new plan of action. He and his officers planned to rid themselves of several of the Spanish vessels they had captured by destroying them. The cargo they held was transferred to the *Centurion* and the *Gloucester*. They also took the rigging, spars, masts, sails, hawsers and any other equipment they thought they might be able to use, and transferred these to their two ships. Food supplies of beef, pork and pickled turtle meat was divided amongst the two ships. One of the Spanish vessels, they had decided to destroy, was the *Nuestra Senora de Carmen*. They unloaded and transferred the cargo on that vessel, which included steel, horse shoes, medicines, nails and two large mirrors to the *Centurion* and *Gloucester*.

By the end of April 1742, they were on their way across the Pacific to China. As they sailed, the ship's carpenters worked on the *Centurion's* foremast. Anson had discovered that the foremast was splitting from the forecastle to the top. The wood used to repair the

foremast was taken from the *Nuestra Senora de Carmen*. Its 56 foot high foremast was used to repair the *Centurion's* mast. Incidentally, the *Carmen's* foremast was constructed of the same type of wood found in the Philippines and known there as "maria wood." It was also referred to as Spanish Elm. To strengthen the foremast, the carpenters added additional iron hoops to hold it in place.

They sailed the *Centurion*, without a foresail, as it had been badly torn in so many places, and the sail makers were unable to repair it sufficiently for use on the foremast. Further repairs would be made in Macau when they arrived there. In the meantime, they had to deal with an outbreak of scurvy, which even affected Anson. By July 24, 1742 there were 148 men still alive on the *Centurion*. They had lost 70 members of the crew during the voyage from Mexico. By this time, it was also becoming clear that the *Gloucester* was in worse shape than they had anticipated. The ship's pumps were working overtime in order to keep the vessel afloat. There was eight feet of water in her hold. Captain Mitchell of the *Gloucester* informed Anson that his ship was slowly sinking. Many of the men aboard both ships were still desperately ill with scurvy and had little strength to attend to their duties.

Commodore Anson realized that the *Gloucester's* situation was hopeless. He began transferring the crew, cargo, provisions and stores from the vessel to the *Centurion*, which was still in very good shape if compared to her sister ship. In the end, they set fire to the *Gloucester* on August 16, 1742 and watched her burn. When the flames reached her powder magazine, she was blown to bits.

The *Centurion* finally came to an unidentified island in the latter part of August which was covered with coconut trees. The men began bringing coconuts aboard the *Centurion* and the refreshing coconut milk was enjoyed by everyone on the vessel. The very sick members of the crew were especially helped at this time by having some fresh provisions to drink and eat. By then, there were only 71 crew members on the ship who were well enough to continue attending to their duties. They consisted of officers, sailors and cabin boys. Eventually the vessel came to the island of Tinian in the Marianas by August 28, 1742. There, they sent ashore the sick members of the crew to recuperate. In the meantime, the healthier men began repairing the *Centurion*. They moved all of the guns, armaments and anything else that they could to the stern of the vessel lifting the bow out of the water. The shipwrights began removing the rotten planks from the ship's bow and replaced them with new wood and re-caulked the entire area. But they found that it was still leaking. They repaired the same area three times – each time going through the same process of moving guns, armaments and other items to the stern and re-lifting

the bow. It was discovered that the leak was caused by a bolt hole which was finally repaired. While at Tinian, the sickly members of the crew were all restored to good health.

The *Centurion* sailed from Tinian and sighted the island of Formosa (Taiwan) on November 4, 1742, but continued on to Canton, China. Commodore Anson anchored the *Centurion* in the Great West Channel located at the entrance to the Canton River which was twenty miles from Macau. They were surprised to see that a boat with three pilots had suddenly arrived alongside the *Centurion*. One of the pilots spoke Portuguese, and they were able to communicate with him in that language. They discovered that there were four British East Indiamen already there, as well as a privately owned English vessel. There were also two French vessels, two Dutch ships and two Danish vessels moored in the port. Two days later the *Centurion* found anchorage at the Portuguese colony of Macau.

The Portuguese began operating trade activities in Macau in 1535. In 1552, they received permission from the Chinese to construct warehouses in Macau for their own use. The warehouses contained a vast quantity of trade goods they were planning to ship to their European markets. Two years later in 1557, they were allowed to set up a permanent trade post in Macau in return for a yearly rental fee. It was not until the 1840s that they were given permission by the Chinese government to govern the colony on their own.

The Portuguese and Chinese in both Macau and Canton realized that the *Centurion* had not arrived in their ports to trade but to repair their vessel. The ship needed extensive repairs to her hull, decks and rigging, sails and basically required a complete overhauling. They needed to restock their provisions taking on additional supplies. While in Macau, Anson hired additional crew members for the *Centurion*. He let it be known in Macau that after repairing the *Centurion*, he was planning to sail to Batavia and from there to England. However, the truth of the matter was that he planned on repairing the ship, so that he could capture the incoming galleon from Acapulco as it approached the Philippines.

By the middle of April 1743, the *Centurion* set sail for the Philippines. While the ship was at sea Commodore Anson informed his crew of his true intentions to capture the Manila galleon. The men were overjoyed by his decision and envisioned the riches the capture of the galleon would bring to them. Anson began an intensive program of training his men for the upcoming battle with the Spaniards. Their training consisted of target practice and sharp shooting, as well as shooting from the top yards of the masts. Anson intended on using every gun available on the ship to attack the incoming galleon the *Nuestra Senora de la Covadonga*.

It should be noted that fifty percent of the men provided to Anson by the Admiralty for the mission had been rounded up by press gangs in the areas around Portsmouth. The other half of the crew, were old age pensioners, taken out of retirement, and barely able to perform their duties on the ships as they were in their sixties and seventies. Also in the crew were men who lost limbs in previous missions or were lame. It was no wonder that many of these men died during the voyage from England to Asia, as they were already handicapped by age and infirmities.

Nevertheless, while the men continued the training program, stories began circulating amongst them that the galleons were constructed of impenetrable woods, and that their sides could not be damaged by cannonballs. Some of the crew members were worried that they would not be able to capture the galleon, and that they would be annihilated by the Spaniards. However, Anson had no doubts that his 26 pounder guns would be able to destroy the galleon if they came within close range of her.

By May 1743, the *Centurion* was cruising along the eastern coast of the Philippine island of Luzon near the San Bernardino Strait, where they knew the galleon would have to pass through, in order to make its way to Manila. It had always been the routine for Manila to send out a vessel from Cavite with a pilot to direct the ship through the waters between the Strait and Manila, which were filled with islands, sandbars and shoals. The pilot's vessel usually waited at the San Bernardino Strait for the galleon to arrive. In this case, the escort vessel was the *Senora del Pilar*, but it was not ready in time to meet the incoming galleon at the Strait. However, the captain of the *Nuestra Senora de la Covadonga* was unaware of this. When he spotted a craft in the distance, he assumed it was the *Senora del Pilar* waiting for him, but it was the *Centurion* lying in wait.

The highly experienced Captain General of the *Nuestra Senora de la Covadonga* was Admiral Jeronimo Montero, a Portuguese commander in the service of the Spaniards. While he was in Guam, he was informed by the Spanish governor that English vessels were in the region. He was not overly concerned, as he was under the impression that the *Centurion* had a much smaller number of men on board the vessel in comparison to the 530 men on the galleon. In addition, it also had approximately 114 passengers. In any case, he also felt that the Englishmen would not be much of a match against his vessel, which was a large ship of 700 tons and carried 60 guns, as well as additional weaponry.

According to Le Gentil, he acknowledged Captain General Montero's vast experience as a mariner. He said that, "The General of the galleon which was captured by George Anson in 1743 was a Portuguese and

had been a sailing master. He was a man of low origin, like all the generals of the Manila galleons, some of whom started life as lackeys, but this fellow was of some importance, as he was a good sailing master, at least so I was told. According to the author of the account of Lord Anson's voyage, this Portuguese was the bravest and cleverest officer at that time in the galleon service. It is not my intention to cast any reflections upon the courage of the general, whom I have never known. I shall limit myself to saying that I was told in Manila that he had never had an opportunity to show what he could do in this respect; that his ability consisted only in his skill as a navigator; that he had a perfect knowledge of the Philippine archipelago and had been selected on this account, and that he might have put his knowledge to profitable use and avoided the encounter with Anson by taking refuge in any one of the ports in the vicinity, as he had the wind in his favor. Such at any rate was the criticism of this officer which was repeated to me. For my part I did not regard it as very well founded and I am of the opinion that he could not have evaded Anson after he had been sighted by him at daybreak. It seems to me that the English only vaunted the courage of the Portuguese commander and the skill of his maneuvering in order to give greater importance to their exploit in capturing his vessel. As a matter of fact, it did not require any great effort on their part."[82]

By June 11, 1743, Admiral Montero spotted the coast of Luzon. On June 19, the *Centurion* saw the sails of the approaching *Nuestra Senora de la Covadonga*. She was flying her topgallant sails. Anson, for some reason was under the impression that two galleons would be sailing to Manila that June, but actually there was only the one vessel. He was searching for the second galleon when he realized that the *Nuestra Senora de la Covadonga* was traveling alone and unaccompanied. As Captain General Montero spotted what he thought was the pilot's vessel from Manila, he ordered the firing of one of his guns in salute, to which, the *Centurion* answered with gunfire in reply. As a result, the Spaniards were confident that the ship they spotted in the distance was indeed the *Senora del Pilar*.

On the *Centurion*, Anson had correctly assumed that the Spaniards had probably fired their gun when they spotted what they mistakenly thought was the pilot's vessel. As the galleon was bearing down on the *Centurion*, the Englishmen could see that her foresail was hoisted up and her Spanish flags were raised. The *Centurion* prepared her guns and when the galleon was near enough they began shooting at the vessel, which returned fire using two of her stern chasers. The Spaniards' shots almost immediately destroyed part the *Centurion*'s rigging. The Englishmen were astonished to see that the Spaniards were not using their gun deck cannons. It was later discovered that

the Spaniards had not thought it necessary to use the cannons as they were confident that with so many men on their ship they could easily destroy the enemy vessel. They knew that the English ship only had a small contingent of men, and they were preparing for a hand-to-hand confrontation when the vessels came alongside each other.

As the two ships came within close proximity of each other, pistol shots rang out. The battle was quick and ferocious. The English guns and sharpshooters atop the yards began shooting so skillfully, that it was difficult for the Spaniards to repel the attack.

"The heaviest guns, the 24 pounders, were on the lower gun deck (twelve on each side), while thirteen 9-pounders were ranged on each side of the upper gun deck. Two men were detailed to remain at each of these 25 guns; the other side was left vacant because of the shortage in manpower. The duty of these fifty men was solely to sponge and load their guns. The remaining gunners were made up into several parties of about ten to twelve men each, and their work was to run from gun to gun as it was ready, trice up the gun port, run out the gun, fire it, and bring up a new charge of powder and ball for the two men of the gun to reload it. Then they ran on to the next gun that was ready. Under this arrangement, following the first broadside when all 25 guns would fire simultaneously, each gun would be fired independently and rapidly to the confusion of the enemy, for Anson had discovered that in Spanish vessels the gun crews customarily flattened themselves on the deck whenever they saw the enemy about to fire a broadside, and thus in this manner escaped the deadly effect of the enemy guns. But under Anson's new gunnery instructions, the Spaniards would never know which gun would fire next. For further measure, the commodore had posted a picked group of sharpshooters – 12 in all, 4 to each mast – to fire from the tops. He had trained them assiduously for the past month in musket practice, and all had become very efficient shooters. Their task was to clear the enemy rigging and top deck of marksmen and handlers of grapeshot and pedreros or 4 pound cannons similar to modern outsize shotguns. By 12.30 the two ships were about a half mile apart, parallel to each other. Anson changed his mind about not firing a shot until he was well within point blank range, and ordered his bow guns to fire some preliminary rounds in order to confuse the enemy. The galleon fired with her stern chaser guns, but without doing much harm. Anson then ordered the *Centurion* cleared for action by swinging the sprit sail yard fore and aft in order to be able to bring his ship alongside the galleon and board her over the bows."[83]

The Spaniards were using guns and pedreros (bronze or iron cannons), which were loaded with stones, iron nails and musket balls. By this time, the Englishmen could see that some of the Spanish crew

members were trying to desert the galleon and the officers were attempting to prevent them from leaving their posts. The Spanish gunfire was beginning to die down. The battle had lasted for only two hours and in the end the Spaniards felt compelled to surrender. Anson sent officers to the *Nuestra Senora de la Covadonga* to take possession of the vessel and his own crew members to sail the galleon. Anson elevated Lieutenant Saumarez to the position of Captain on June 21, 1743 and put him in charge of the galleon. In the meantime, cargo and prisoners were transferred from the galleon to the *Centurion*.

On meeting the Spanish officers, Anson assured them that they had acted bravely and took them aboard the *Centurion* where they were treated with every courtesy and great respect. By eight in the evening, 300 of the Spaniards had been released and put ashore. Admiral Montero was seriously wounded in the chest by a musket ball. He was moved to Anson's cabin and was attended there by the *Centurion's* surgeon, Doctor Joseph Allen. While Captain General Montero recuperated on the *Centurion*, he was embarrassed and dismayed when he realized that his vessel had been overpowered by a handful of men. Nevertheless, he and his officers were treated courteously by Anson and his officers and crew members. While he remained in Anson's cabin, the other officers were placed in Saumarez's cabin. The rest of the Spanish prisoners were accommodated on the lower deck.

During the battle, 170 Spaniards were wounded and 64 died. The *Centurion* lost only one man and 17 were wounded. Anson found that the galleon carried 1.5 million silver dollars in payment for the previous year's cargo shipment to Acapulco, as well as additional funds which were privately owned.

Anson later discovered that the Spaniards had quite an arsenal of weaponry at their disposal including muskets, pedreros and half pikes. If all their weaponry had been ready for action the Englishmen would not have stood a chance against them, but most of the Spanish cannons remained unused or in the hold. "At the time of engagement they had 32 guns ready for action, besides four 12 pounders which were mounted between decks but were not used, and eight that were in the hold; that all in all they had 44 guns on board. These were of different natures, from 12 to 6 pounders, amongst which were several brass guns of great length…besides the stones and nails, which villainous implements wounded several of our men. "[84]

Of the *Nuestra Senora de la Covadonga's* condition after the battle, it was clear that her hull, masts and rigging sustained great damage and she was barely seaworthy. The grapeshot used by the Englishmen in the battle against the galleon, indicated that the Spanish vessel was not as invincible as they had thought, but the encounter had to take place at close range in order to inflict as much damage as possible.

The *Centurion* was also damaged by having sustained gunfire to the hull, masts, rigging and shrouds, but it too was still in fairly good condition. According to Anson, he stated later on in a report to the Admiralty in London that the *Centurion* sustained damage to her mainmast, foremast and bowsprit. The ship's rigging had been "shot to pieces." The hull was penetrated fifteen times by gunfire from the Spanish galleon.

Two smaller boats, a pinnace and a barge, which had been lowered during the battle from the *Centurion* and carried soldiers and guns, had also been damaged. Commodore Anson sailed the *Centurion* and the *Nuestra Senora de la Covadonga* to Macau where they arrived on July 11, 1743. Some of the Spanish prisoners were sent ashore. Anson was eager to leave the area as soon as possible. He was concerned that when word of his capturing the galleon leaked out, pirates and privateers would soon try to hunt down the *Centurion* in order to steal the treasure he was carrying. The other problem was that the *Nuestra Senora de la Covadonga* was becoming a liability. It was in great need of repairs and was continuously leaking. Portuguese agents in Macau stated that the Spaniards wanted the ship returned to them and may have acted for them when they purchased the vessel from Commodore Anson for 6,000 silver dollars. In addition to buying the ship, the Portuguese took on the responsibility of taking care of the remaining Spaniards on the vessel. After provisioning the *Centurion*, Commodore Anson sailed to England and arrived back home on June 15, 1744. He anchored the *Centurion* at the port of St. Helens on the Isle of Wight. Upon his return, he was revered as a hero and a brilliant naval commander.

Nuestra Senora de la Santisima Trinidad y Nuestra Senora del Buen Fin 1762

One of the largest galleons ever built in the Philippines was the *Nuestra Senora de la Santisima Trinidad*. The vessel was constructed at the Bagatao Island shipyard (Real Astillero), in the province of Sorsogon, Philippines in 1751. She had a carrying capacity of 2,000 tons and was armed with 60 cannons. Given the fact that she was a massive vessel, she was able to carry as many as 5,068 crates of cargo on a voyage to Acapulco. When she was constructed, the cost of building the vessel amounted to 229,852 pesos. She measured 167 feet in length and was 50 feet in the beam.

The ship was attacked and captured by two British frigates in 1762. The frigates were part of a fifteen ship fleet, which invaded the Philippines in September 1762. The military campaign was orchestrated by the British Admiralty in London and the East India Company in Madras, India as part of the Seven Year's War. This particular war was fought in Europe, North America and in India

between the warring parties of England and France. When the Spaniards, who were neutral throughout the Seven Year's War, became allied to the French in 1761, their possessions in the Americas and in Asia became military targets.

As a result, the British Admiralty quickly launched a plan to attack and capture the Spanish possessions of Havana and Manila. Two military campaigns were organized to carry out the aims of the British Admiralty with ships, officers, sailors and soldiers sent to both arenas. The campaign against the two countries was successfully carried out with Havana and Manila surrendering to the British military officials who were in charge of the individual offensives. In the Philippines, the military campaign was carried out by Rear Admiral Samuel Cornish in charge of the British Royal Navy's vessels involved in the action and Brigadier General William Draper, in charge of the infantry and the land invasion of Manila and Cavite.

General William Draper was basically the moving force behind the Admiralty's decision to attack Manila. He was well placed professionally and socially in London and knew the right individuals in government to approach regarding the campaign to invade the Philippines. He was aware that as the Seven Year's War was winding down in Europe, it still provided an opportunity for the British government and the East India Company in Madras, to invade the Philippines and gain great riches through the venture. For the East India Company, it was also an opportunity to expand its trade operations to the Philippines. The officials at the East India Company were particularly interested in setting up a trade post in Mindanao.

Draper came from an affluent family in Bristol, England where he was born in 1721. His father was a wealthy customs officer and his grandfather was a squire in Berwick. In 1746, he joined the army and served at Culloden with the Duke of Cumberland as a lieutenant and then as a captain of the 20th Regiment by 1749. In 1757, he raised a regiment of 1,000 soldiers for service in the East Indies which became known as the 79th Foot Regiment. He fought in several campaigns in India and while he was in England on leave, he was able to approach influential friends and colleagues who persuaded the Admiralty to launch an invasion of the Philippines in conjunction with their attack of Havana.

When General William Draper returned to Madras to organize the military campaign, he was still in command of the 79th Foot Regiment based in India. For the naval side of the operation, he was ordered by the Admiralty to coordinate the offensive with Rear Admiral Samuel Cornish, who was already in India and in command of the Royal Navy vessels located there. Between the two men, they organized and led the military offensive against the Philippines.

Rear Admiral Samuel Cornish was fifty years old when he became involved in the military campaign and was probably thinking of his retirement from the Royal Navy rather than invading the Philippines. However, as he was ordered to work with Draper, it appears that both men were aware that the venture might be the source of great wealth for the two of them. There is little information about Admiral Cornish, but he had basically devoted his life to a naval career. He began his early work years as a common sailor. When he was in his 30's, he joined the Royal Navy in 1739, and served as a lieutenant aboard the frigate the *Lichfield*. He was later appointed to the position of captain of the *Guernsey* and participated in naval campaigns in Europe. In 1759, he was elevated to the position of Rear Admiral and was given the command of the entire British Royal Navy's vessels in the Far East.

He was characteristically known as a man who was able to make quick decisions without having to consult his superiors. This entailed appointing officers to positions where he felt they were needed, without having received the Admiralty's prior approval to do so. Thus, he quickly assessed a situation and took the appropriate action when necessary. Apparently, when he met with William Draper for the first time, it was evident that the two men liked each other right from the start and were able to work together without any difficulties.

Fifteen ships were prepared and organized in India and when they arrived in Manila, a battle ensued with the Spaniards, and they eventually surrendered to the British. During this time period, two British frigates were sent out to intercept and capture the incoming galleon from Acapulco, which was actually a patache, a smaller trade vessel. However, the whereabouts of the vessel posed a problem as it was difficult locating the ship. The name of the vessel was the *Filipino* and it was under the command of Captain Juan Antonio Blanco de Sotomayor. The ship carried the silver payment of 2.3 million silver pesos for goods sent to Acapulco the previous year, as well as the yearly subsidy for the government of the Philippines. When the ship arrived off the coast of Samar, the captain sent a galley to Cavite requesting the services of a chief pilot to maneuver his vessel through the San Bernardino Strait. At the time, he was unaware that the British had captured Manila, and he was also unfamiliar with the European conflict of the Seven Year's War.

As the galley arrived in Manila Bay from Samar to pick up the chief pilot, it was captured by the British. After seizing the vessel, the British learned from the officers of the galley that the galleon had already arrived in the country. Admiral Cornish immediately dispatched two frigates to find and capture the ship. The two ships were the *Argo*, a 60 gun vessel commanded by Captain King, and the *Panther* of 32 guns under the command of Captain Parker. Meanwhile,

as Captain Sotomayor waited on the galleon for the return of the galley and chief pilot, he was informed by agents of the acting Spanish deputy governor, Simon de Anda, that the British had invaded Manila. Simon de Anda had already formed a resistance movement against the enemy outside of Manila. He instructed Captain Sotomayor to unload the cargo and move it to a secure location on land, as the silver he carried on the galleon was needed to finance his efforts against the British.

As a result, Captain Sotomayor beached the patache along the shore of Palapag, Samar and began removing the chests filled with silver dollars to the shore, as well as silver which was not documented on the ship's register. The silver was transferred to Albay, where it was transported to Simon de Anda's camp in Bacolod, Pampanga by Franciscan parish priests.

In the meantime, as the two frigates were searching for the *Filipino*, they instead encountered the *Nuestra Senora de la Santisima Trinidad*. The two frigates captured the *Nuestra Senora de la Santisima Trinidad* on October 30, 1762 at the entrance of the San Bernardino Strait (the Embocadero). The galleon had embarked from Cavite on September 3, 1762, and as she neared the Marianas, she was severely damaged by strong winds and lost one of her masts. She was in the process of returning to Cavite for repairs when she was spotted by the British frigates. They chased after her and engaged the galleon in a fierce battle during which the *Argo* was pelted with heavy gunfire and musket shot.

Even though the galleon was heavily damaged by the storm, she was still able to put up a good fight against the English frigates. In fact, one of the frigates, the *Argo*, was so severely damaged by gunfire from the galleon that she temporarily withdrew from the conflict, leaving her sister ship the *Panther* to carry on alone against the Spaniards. During the conflict, seventy-two of the English crew members were killed, while the *Nuestra Senora de la Santisima Trinidad* lost twenty-eight men out of a crew of 800. The two frigates had fired more than 1,000 twenty-four and eighteen pounder cannonballs at the galleon, but they were unable to penetrate the galleon's sides and only caused a minimal amount of damage. The galleon's strongly built hull was a testament to the ability of the Spanish shipwright's in the archipelago, who were able to design durable vessels of impenetrable tropical Philippine hardwoods.

When the *Nuestra Senora de la Santisima Trinidad* was attacked by the British frigates, she was only using six of her sixty guns against them. The rest of her guns had been stowed in the hold to provide more space for cargo. Nevertheless, she still bravely defended herself and with only six cannons she had severely damaged the *Argo*. The

next morning the two frigates renewed their attacks. The *Argo* had rejoined the fray and with the *Panther*, they were able to fiercely fight the Spaniards that they finally surrendered to the British captains.

Admiral Cornish wrote a letter to the British Admiralty on November 10, 1762, in which he described the capture of the galleon. He said that,

"Captain King in the *Argo*, returned, with a letter from Captain Parker (of the *Panther*), acquainting me, that in consequence of my orders, having the 30th of October, got the length of the island of Capul, near the entrance into the Embocadero, in pursuit of the *Saint Philippina* (the *Filipino*) where the *Argo* had come to an anchor, just as the day closed saw a sail, and stand to the northward; at eight in the evening he got sight of the chase, about two leagues to the leeward, but unluckily, the rapidity of the counter current to what the chase was in, was drove among the Narango's (the Naranjas group of six islets near the San Bernardino Strait) in the utmost danger of being lost, and obliged to anchor; the frigate having escaped the danger, got up with the chase, and engaged her near two hours; but was roughly handled, that Captain King was obliged to bring to, to repair his damaged ship. By this time the current slackened, which enabled Captain Parker to get under sail with the chase in sight. About nine the next morning, he came up with her, and after battering her two hours within half-musket shot, she struck. The enemy made but little resistance, trusting to the immense thickness of the sides of their ship, which the *Panther* was not able to penetrate, excepting her upper works. Captain Parker was no less disappointed than surprised, when the General came on board, to find, that instead of the *Saint Philippina*, he had engaged and taken the *Nuestra Senora de la Santisima Trinidad*, who departed from Manila the 1st of August (actually it was on September 3rd) for Acapulco, and had got 300 leagues to the eastward of the Embocadero; but meeting with a hard gale of wind, was dismasted and put back to refit. She had 800 men on board, and pierced for sixty guns, but when Captain King engaged her, had only six mounted, and had but thirteen when taken. She draws thirty-three feet of water, and is a much larger ship than the *Panther*. I cannot ascertain the value of her cargo, but there is to the amount of one million and a half of dollars registered, and she is reputed to be worth three million. "[85]

"Captain King left the *Panther* with her prize at an anchor about three leagues south of Corregidor, the mouth of this bay (Manila Bay), and as I have set two reinforcements of men with launches and warps, I hope very soon to have them in safety. As the taking of this prize prevented Captain Parker from pursuing the *Saint Philippina* and as he informs me the navigation is very dangerous for large ships, I shall

dispatch the *Argo* and the *Seaford* which have just cleared to take possession of the treasure on board agreeable to the capitulation; for which purpose some officers will be sent properly authorized, by the Archbishop, late Governor General. I flatter myself this blow will have consequences agreeable to his Majesty's intentions as it will effectually destroy the commerce of Spain in these parts. I am, sir, Your Most Obedient Humble Servant, S. Cornish. "[86]

After the capture of the *Nuestra Senora de la Santisima Trinidad*, the British continued searching for the *Filipino*. They eventually located her, but when they realized that her cargo had been removed, they set the ship afire in anger and frustration.

Chapter 8

The *San Diego* Warship Galleon

Even though the remains of other galleons have been uncovered in Asian waters, it was only the excavation of the *San Diego* which has provided an insight into how the Spanish vessels were constructed in the Philippines. Moreover, the *San Diego* provided invaluable information about the type of weapons the galleons carried during the late sixteenth century. There were only two other Manila galleons, which have been found and explored by archaeologists, but in both cases little remained of the vessels to provide details on the ship's construction in the archipelago although, their cannons were discovered. The two ships were the *Nuestra Senora de la Concepcion*, which sank in 1638 and the *San Jose* which was lost in 1694.

The *San Diego* was excavated by underwater archaeologists in the 1990s during several seasons of work. The team involved in the project, consisted of Henri Bernard-Maugiron, Michael Rival and Excavation Director, Frank Goddio. During the excavation of the shipwreck site, the team uncovered 28,000 artifacts including ceramics, pottery, Chinese water jars and artillery. They also discovered that part of the ship's wooden hull was still extant. The remains of the vessel and its artifacts are now part of a large and permanent exhibition at the National Museum of the Philippines in Manila.

The galleon was originally constructed in a small shipyard located on the island of Cebu in 1590. She was in service for ten years as an inter-island merchant vessel known as a patache, before sailing to Cavite in the early months of 1600. As a trade vessel, she was never employed in the Manila-Acapulco trade run. However, the vessel can be classified as a warship galleon as she was turned into a military vessel by Dr. Antonio de Morga. All warships in Spain about this same time were known as "warship galleons," and this would have been the case in the Philippines as well.

Dr. Antonio de Morga Sanchez Garay Lopez de Garfias was born in Seville in 1559 into a prominent family. His father was a banker who was originally from Vizcaya. As a young adult, Morga attended the University of Salamanca and after graduating, he was employed in one government position after the other. In 1582, he was the mayor of Baracaldo in Vizcaya and married Juana de Briviesca y Munatones. When he was appointed to the position of Advisor and Lieutenant General to Governor Gomez Perez Dasmarinas of the Philippines by Philip II on August 18, 1593, he was only 34 years old. He served as

the Deputy Governor of the colony until Spain could appoint a new governor. The posting actually made Dr. Morga the second in command of the Spanish colony.

With his family, he embarked from Cadiz in February 1594 and sailed to Veracruz, Mexico arriving there in May. He made his way to Acapulco and arranged to sail on the galleon which was leaving for Manila. There were two galleons sailing to Manila that year and they were the *Santiago* and the *San Felipe*. As he was the most important government official sailing aboard one of the galleons, he was given the title of Captain General of the flagship as an act of respect and courtesy. There is no doubt, that the actual captain of the vessel turned over his cabin to Dr. Morga and his family and found other accommodations on the vessel for himself.

When Morga arrived in Manila on January 10, 1595, he found that Governor Gomez Perez Dasmarinas had been assassinated by a Chinese sailor. The government in the city was in turmoil and serving as acting governor was the slain governor's son, Luis Dasmarinas. With the arrival of Dr. Morga, Luis Dasmarinas turned over the governor's post to him. In 1596, the former Governor Gomez Perez Dasmarinas was replaced by Governor Francisco Tello de Guzman. When the new governor arrived in Manila, Dr. Morga relinquished his position as Deputy Governor and was employed as a judge with Manila's Royal Audiencia.

Incidentally, when the *San Felipe* returned to Acapulco from Manila, it was shipwrecked off the coast of Japan and looted by the Japanese. The ship carried a cargo valued at 500,000 pesos, but if the vessel had reached Acapulco, the cargo could have been sold for as much as two million silver pesos.

In early November 1600, a Dutch fleet under the command of Admiral Olivier van Noort arrived in Manila Bay. They blockaded the bay and intercepted any vessels that were sailing to Cavite or Manila. While they attacked the vessels, they also seized the cargoes they carried. The Spaniards in Manila and Cavite were angered by the Dutch blockade and were afraid that they might attack their incoming or outgoing galleon. As a result of these concerns, the Spaniards decided to launch a fleet of their own against the Dutch to destroy their vessels in a confrontation.

As part of their plans to confront the Dutch, Governor Tello de Guzman gave Dr. Morga permission to organize the vessels in the fleet. When Dr. Morga arrived at Cavite, he found several vessels there including the *San Diego*. The *San Diego* had most probably arrived in Cavite to deliver or pick up cargo for the port of Cebu. Dr. Morga commandeered the *San Diego* as his flagship and began to turn the merchant vessel into a warship galleon.

Unlike the galleons which were owned by the government, merchant vessels were often privately owned. In the case of the *San Diego*, it was owned by two Spanish merchants who were based on the island of Cebu: Luis de Belver and Anton Tomas. One of the owners, Luis de Belver, was most probably on the vessel when it sank as food jars were recovered during the ship's excavation with his initials on them. It was the usual practice for the officers and wealthy passengers on a galleon to place their initials or a mark of identification on their personal food jars and crates. When needed, they could be easily found and identified in the ship's hold.

The Dutch fleet embarked from Holland on September 13, 1598 and consisted of four vessels: the flagship *Mauritius* of 275 tons; the *Hendrick Frederick* of 350 tons and two yachts, the *Eendracht* (Harmony) and the *Hope* both of approximately 50 tons each. Aboard the vessels were 250 men. The commander of the fleet Admiral Olivier van Noort was a tavern owner from Rotterdam, Holland. He sailed aboard his flagship the *Mauritius*. The *Hendrick Frederick* was commanded by Vice Admiral Jacob Claesz. When the fleet sailed from Holland, it stopped at Plymouth, England where van Noort hired Captain Melis, who formerly served under Thomas Cavendish when he circumnavigated the world from 1586 to 1588.

The Prince of Orange in Holland, Maurice of Nassau, gave van Noort his seal of approval for the expedition which basically also allowed him to attack the Spaniards wherever possible. In his letter of approval he stated the following: "We, Maurice, Prince of Orange have fitted out these vessels which we are sending to the coasts of Asia, Africa, America and the East Indies to negotiate treaties and to trade with the inhabitants of these regions. But as we have been informed that the Spanish and the Portuguese are hostile to the subjects of our provinces, and are interfering with their navigation and trade in these waters, contrary to all natural rights of cities and nations, we hereby give explicit orders to go to these islands, to resist, to make war, and to strike as many blows as possible against said Spanish and Portuguese. "[87]

After departing from Plymouth, the fleet sailed along the western coast of Africa where an attack by natives resulted in the death of van Noort's brother, Cornelis, and Captain Melis. From Africa, they sailed to Brazil. By then, the men on the ship were already sick with scurvy. As they were attacked by natives along the coasts of Brazil, it was difficult to replenish their provisions and take care of the ailing crew members. They nevertheless, continued on their journey to the Strait of Magellan. The men were exhausted and many were still sick. As a result, they decided to cross the Atlantic and go to the island of St. Helena. They planned to spend the winter on St. Helena and restore

the sick crew members to health, but as they could not find the island, they returned to Brazil. They eventually found a small island and took shelter there for two weeks. As one of their vessels the *Eendracht* was leaking badly, they decided to abandon her and set her afire. The other yacht the *Hope* was renamed. She was from then on known as the *Eendracht*.

When they reached Patagonia, they stayed at Port Desire for one month. While there, they were able to repair their ships and take on fresh provisions of water, salted penguin meat and eggs. By November 5, 1599, they arrived at the Strait of Magellan. They had lost one hundred men through conflicts with the coastal natives of South America and in Africa, as well as from illnesses they had endured. Along the South American coasts, they had been involved in attacking and looting Spanish vessels. After the passage of 116 days, the fleet entered the Pacific on February 29, 1600. As they continued their voyage along the coasts of Chile, they were caught up in a storm and at some point lost sight of the *Hendrick Frederick* and the 60 men aboard the vessel. In any case, van Noort's small fleet was now reduced to ninety men and two vessels the *Mauritius* and the *Eendracht*.

However, the *Hendrick Frederick* was not destroyed in the storm but had, in fact, later turned up in the Moluccas. Even though the ship lost sight of van Noort's vessels during the storm, Captain Isaias de Lande, of the *Hendrick Frederic*, decided to sail to the Moluccas and obtain spices there which he could take back to Holland. He planned to buy the spices in exchange for items he carried on his ship which included mirrors, knives, metal basins and other small objects. When he arrived at the Marianas, he stayed there for a few days. A small frigate he had captured off the coast of Peru was in need of urgent repairs. Rather than taking the vessel with him, he ordered the sailors to destroy the frigate and set her afire. It is unclear, if Captain Lande and the *Hendrick Frederick* eventually returned to Holland.

By May 1600, van Noort sailed along the coasts of Peru and Ecuador and captured several Spanish vessels. He decided to sail directly to the Philippines rather than going to Baja California as originally planned. He initially planned to sail to Baja California to intercept and capture the Manila galleon as it traveled to Acapulco. But he probably changed his mind about capturing the galleon as he heard that the Viceroy of Peru, Luis de Velasco, was organizing a fleet of ships in the Peruvian port of Callao to go after him. However, when Velasco's fleet eventually sailed from Callao, the fleet's flagship sank and everyone aboard the vessel drowned.

Before sailing towards the Philippines, van Noort ordered the destruction of a boat he had captured off the coast of Santiago, Chile,

and which had become part of his little fleet. When they captured the Spanish vessel it contained a cargo of little value consisting of Moroccan and Spanish leather, as well as wax (tallow). The Spaniards on the boat managed to escape from the burning vessel by swimming to the shore.

The *Mauritius* and the *Eendracht* reached the islands of the Marianas on September 16, 1600. From there, they continued their voyage to the Philippines arriving at the San Bernardino Strait in October 1600. As they cruised along the shores of the Philippines, they began attacking and looting villages and helping themselves to whatever provisions they could find. They also attacked sea vessels and captured several Filipinos who acted as pilots, as they were familiar with the region.

They anchored in the Bay of Albay, on the eastern coast of Luzon, and posed as Frenchmen. Van Noort was able to convince the local officials that he had received special permission from the Spanish king to trade in his possessions. The ruse apparently worked as they were allowed free access to sellers of provisions in the area. They were probably also welcomed by the natives as they paid handsomely for whatever provisions they purchased. Van Noort was so bold that he even invited two Spaniards from Albay, Captain Jiron and Francisco Rodrigo, to board the *Mauritius*. When they came aboard the Dutch vessel, they found that the ship had French flags flying atop the masts and one sailor posing as a Catholic priest. Van Noort was able to get away with the hoax as he spoke fluent French. From the Bay of Albay, they began their voyage to Manila. Meanwhile, the Spaniards in Manila had already learned of their presence in Albay and had initially thought that the *Mauritius* and the *Eendracht* were English ships. They did not realize until later that they were, in fact, Dutch vessels.

Governor Tello de Guzman received news in a letter on October 19 from Captain Jiron in Albay of the arrival of what he thought were friendly Frenchmen. Captain Jiron wrote that he was allowed to board the French vessel and noticed that it was well armed with weapons and artillery. He said that there were about 90 men on the ship and that some of them were sick. Captain Jiron went on to say that he treated the visitors well, as he honestly thought that they had the permission of the Spanish king to trade in the region. As soon as Governor Tello de Guzman received Captain Jiron's letter, he arranged for Captain Pedro de Arceo and Captain Cristobal de Arceo, infantry officers, to ambush the Dutch if they tried coming ashore. The order was rescinded as the Spaniards discovered that van Noort had already sailed from Albay, and it was difficult knowing where he was going to next.

On board one of the Dutch vessels was a Spanish prisoner, Manuel Salvador. He was serving as a crew member on a Spanish ship the *Buen Jesus*, when it was captured by the Dutch in the Americas. He managed to escape from his captors on October 22, 1600. He also managed to arrive in Manila where he reported to officials there, that the Dutch had every intention of sailing to the Spice Islands, but before going there they intended to attack and plunder Spanish vessels in the Philippines. The Spanish officials received confirmation of Manuel Salvador's statement on October 27, when they captured a crew member of one of the Dutch vessels, who also happened to be an Englishman, John Calleway. Through him, they discovered van Noort's true plans.

After John Calleway was captured, the Dutch sailed to Manila Bay and arrived there on November 24, 1600. While anchored near the small island of Fraile near Mariveles, Commander van Noort wrote a letter to Governor Tello de Guzman informing him that he had received some provisions from the natives and asked that the governor order the villagers to provide him with additional provisions. Moreover, he added that he was willing to meet with the governor and kiss his hand. It was obvious that the Dutch were not afraid of the Spaniards.

The Dutch began to seize and plunder trade vessels that arrived in the bay. The vessels they seized included a frigate which they sank and a trade vessel from Japan which was loaded with a cargo of flour. In return for seizing the Japanese vessel, the Dutch provided its captain with a sword and other trade goods to mollify the officers and crew of the boat. They also captured a Chinese sampan and from the captain of that vessel they learned that within a few months many Chinese trade junks would begin to arrive in Manila from December to April. They would be loaded with silks and other valuable goods. The Dutch welcomed this news and decided to stay in Manila Bay and capture the Chinese junks and their cargoes. They also were informed that the galleon from Acapulco the *San Tomas*, was expected in March of the following year. They looked forward to capturing the ship and its silver valued at 1.5 million pesos.

At the governor's palace in Manila, Governor Tello de Guzman ordered the preparation of three vessels which were moored at Cavite for the upcoming confrontation with the Dutch. These included the *San Diego*, which was to serve as the fleet's flagship, and a vessel which had recently been constructed at Cavite the *San Bartolome* of 50 tons. The Spaniards also commandeered a Portuguese trade vessel, the *San Jacinto*, which was owned by a merchant in Malacca. The vessel was at Cavite delivering trade goods and was under the command of Captain Esteban Rodriguez Perez. In addition to the larger vessels,

there were also two smaller boats with Chinese soldiers.

The governor appointed Dr. Antonio de Morga as the Captain General of the fleet, which was apparently resented by the other more experienced officers in Manila. They felt that the position should have been given to one of them rather than to a government functionary who was not an experienced naval man. They voiced their objections, but they were overruled by the governor. In addition, the governor appointed Gomez de Molina, as the captain of the *San Diego.* The chief pilot of the galleon was Alonso Gomez Hombra.

To command the Portuguese vessel and serve as admiral of the fleet, as well as its captain, Juan de Alcega was selected for the appointment. He was originally from the Biscayan region of Spain and was highly respected in Manila where he was known as an experienced mariner. To defend Manila from a Dutch attack by land, Cristobal Tellez de Almacan was ordered by the governor to organize defensive measures for the city. The port of Cavite was also reinforced to withstand an enemy attack.

Accompanying Dr. Morga and Admiral Juan de Alcega were many illustrious members of the Spanish community of Manila. This included wealthy Spaniards who were determined to participate in the naval campaign on behalf of their king. It was estimated that as many as 150 distinguished Spaniards took part in the offensive against the Dutch. “Men, honorable and wealthy, went on this journey to serve His Majesty-they were three hundred in all, including paid personnel and the sailors. Even more went aboard with great gallantry, courage and determination not only to undertake that enterprise, but any other of greater force and difficulty. ”[88]

When the refitting of the *San Diego* was completed the ships were boarded by the officers, dignitaries and crew on December 11, 1600. In addition to the vessel’s regular crew, the Spaniards had hired Japanese samurai mercenaries to serve on the galleon as soldiers. In total, there may have been as many as 450 individuals on the vessel including all of their personal possessions and provisions. We know that many extra cabins were set up on the main deck and in the stern superstructure to accommodate all of the dignitaries, which also obstructed the activities of the soldiers and gunners when they confronted the Dutch. Moreover, as the main deck was so crowded with cargo and chicken coops, the obstructions made it difficult for anyone to move about without bumping into something.

Dr. Morga changed the flagship’s name from the *San Antonio* to the *San Diego* as the vessel’s role as a warship required a new name to go with its elevated status. The *San Diego* was armed with artillery from Fort Santiago and consisted of 14 bronze cannons. Ten additional cannons were placed on the *San Bartolome*, while the Portuguese

patache the *San Jacinto* was armed with additional weaponry. In addition to the heavy guns loaded onto the ships, a large contingent of additional soldiers including Spaniards, Mexicans, Filipinos and Chinese came aboard the vessels. The *San Diego* carried 700 tons of cargo, which most probably consisted not of items to be sold, as it was outfitted as a war vessel, but the provisions, supplies, equipment and personal possessions of the individuals on board the ship. As the galleon's mission was to pursue the Dutch to the Spice Islands if necessary, it was well provisioned and equipped for a long journey.

Although the *San Diego* was considered a small vessel, the addition of heavy artillery pieces would have added to the weight loaded onto the ship. Apparently, when it sank off of Fortune Island, south of Manila Bay, it was so overloaded with everything that was needed to conduct a long campaign against the Dutch at sea. All of this added weight probably caused the sinking of the vessel rather than the direct gunfire from the Dutch ships. As mentioned before, the sides of the vessels constructed in the Philippines used tropical hardwoods which enabled them to withstand cannon ball fire or the penetration of these missiles from an enemy ship.

When the *San Diego* embarked from Cavite, some eye witnesses later stated, in an investigation into the sinking of the ship, that the galleon was already listing to one side when she sailed from the port. Admiral Juan de Alcega, who was commanding the Portuguese vessel, urged Dr. Morga to add additional ballast in order to correct the ship's balance, but he ignored his suggestions. The owner of the *San Diego* also asked Morga to add additional ballast, but he too was ignored. The account of the interaction between the owner Luis de Belver and Morga went as follows: "Captain Luis de Belver told Dr. Morga that the ship was very light, and that it would only sail properly if it was carrying a lot of ballast. He also recommended unloading the crates and the beds and leaving them on shore. Not only did Morga ignore this advice, but on the contrary, he ordered Ordiales (probably the ship's master) to place all those items below decks, where they took up practically the entire hold. "[89]

The lack of communication between Morga and the other Spanish officers continued. On the night of December 12, Dr. Morga rushed out of the port of Cavite with the *San Diego* in hot pursuit of van Noort's flagship. He failed to notify the other officers that he was leaving the port and did not wait for the vessels to join him as initially planned. Morga decided to confront the Dutch on his own. As he was not an experienced military or naval officer, he had no idea what he was actually doing. The other officers were astonished by his departure from the port and quickly prepared to join him in Manila Bay.

In the morning, when the Dutch spotted the approaching galleon, they fired the first shot, hitting the *San Diego's* rigging and a pump, and wounding some Filipino sailors. The Spaniards returned fire shooting a cannon ball at the Dutch vessel only to find that it plopped into the water nearby. It did not have the velocity to reach the Dutch ship. The *San Diego* at this time was either heavy in the water or she had sustained additional damage. As the water was already reaching the ship's gun deck, this meant that it would have been impossible to open the gun ports and use their cannons as the interior of the vessel would have been flooded. The Spaniards could only use the smaller guns on the main deck or on the superstructure to shoot at the Dutch vessels. Many on board the *San Diego* were beginning to panic and tried to abandon the vessel.

During the battle the Spaniards could see that the enemy's flagship, the *Mauritius*, was on fire. Both the *San Diego* and the *Mauritius* were now side by side and Spaniards jumped into the Dutch ship and engaged in hand to hand combat with the Dutch sailors. The Spaniards tied a cable to the Dutch vessel holding her in place. As their own vessel was obviously sinking, some Spaniards thought of taking the Dutch ship as the *San Diego* appeared doomed. When the fire broke out on the *Mauritius* they decided against the idea and cut the cable to the Dutch ship in an attempt to flee from the burning vessel. But just as soon as the *San Diego* was disengaged from the Dutch ship, it began to sink. Some survivors managed to swim to the small island of Fortune, the rest drowned. One survivor of the incident related the following:

"Our ship tilted and sank carrying with it all those who did not know how to swim and were afraid to jump into the water. Some of them were armed men so that the majority sank with the boat. There were also those who could swim well but were carried to the bottom by the force of the suction. In the water, our men each tried to save themselves one way or another. Some, because it was their unfortunate fate, went to the enemy ship to be saved but instead were received by the heretics with lances wounding them with great cruelty. They hit Captain Gomez de Molina with a lance. In spite of this, he swam until he reached the shore, but he had lost so much blood that he died at the water's edge. Some others died this way, and those who escaped were picked up in Fortune Island, 18 leagues from this city (Manila), and stayed there till there were ships available to bring them back. Meanwhile, the Portuguese boat that had just arrived, seeing what had happened, sailed (after the enemy). Our captainship was engaged to that of the enemy for six hours, from 8 am to 2 pm till it sank."[90]

While the battle between the *San Diego* and the *Mauritius* was in

progress, Admiral Alcega arrived to join in the fray. He turned his attention to the *Eendracht* and began to attack the enemy vessel. "After firing at it with its muskets and cross-bows two or three times they grappled the enemy ship (to board it) by the square stern at the side, and our men jumped into it led by the Admiral himself. The enemy defended themselves with their artillery. They fired some gunpowder cartridges as was usually the case and fire broke out. Our men got pails of water to put out the fire. The enemy, seeing our forces, and knowing that they would have a hard time, as the best among them had been killed, surrendered. Admiral Juan de Alcega captured nineteen men alive. We had only one casualty, Juan Bautista de Mondragon, nephew of a (clergy) member of the Manila Cathedral, who was hit by a bullet. One from Canarias drowned, jumping from one ship to another. Wounded seriously on the thigh were the captain and master of our flagship, Juan Lopez Becerra, and a certain Calderon, on the shoulder and part of the arm. They got two casks of oil and two of wine, a lot of metal basins, candle holders, brass mortars, round irons and other things of little value from the enemy ship and also, twelve pieces of artillery, eight of cast iron, large and good, four small ones, an iron chest found in the stern's chamber containing the Admiral's papers and the letters given to him by the Prince of Orange when he was named ship's captain, one in his language and the other, in ours. There were letters for Peru which the Holy Inquisition has in its possession."[91]

"Then, Admiral Juan de Alcega ordered some sailors to get into the surrendered enemy ship to repair it and to bring it to Manila. It had lost the main mast, tackle, rigging and cordage, destroyed by our men. When they boarded, it did not leave anything standing. Thus, it could not sail. They took it to Luban Island nearby. From there, our men saw a damaged ship which seemed to be going towards them. They thought it was the enemy captainship, already defeated by us, going towards them for repairs. They had heard our victory songs sung there. So they believed it could not be otherwise. But the truth was that, it was the enemy going to its flagship to see if they could help it. As they saw the two ships together and heard no sound of firing, they turned back. To date, nothing is known about it. It is believed that it had sustained great damage, and so badly damaged it did not have the will to wait further. It left victorious after sinking our captainship. Although some said that while swimming away they saw the men of the enemy throwing lances at those they could reach." [92]

After the *San Diego* sank and Admiral Alcega had captured the *Eendracht*, he sent word to the governor requesting orders as to his next move. The governor instructed him to follow the *Mauritius* and capture the vessel, but if he could not locate the whereabouts of the

enemy vessel, to return to Manila. The Dutch prisoners, which included Captain Lande of the *Eendracht*, were executed except for some young cabin boys who were turned over to a monastery in Manila.

The following is the letter found in Captain Lande's sea chest, which was discovered by the Spaniards when they captured the *Eendracht*. The letter was from Maurice de Nassau, Prince of Orange and read as follows:

"To foster friendship among some foreign nations and kingdoms, and for other considerations, we have seen it fit to send a good number of ships, well protected, to as far as Africa, Asia and America and the East Indies islands in order to trade with their subjects and residents. We have learned that the Spanish and Portuguese are opposed to the subjects of these provinces, and so hinder the navigation and trade in those parts, against all natural law, and so all our countries and nations have found it necessary to assign some brave and experienced captains to carry out our intentions. Fully informed of the fidelity and experience of Isaias Lande, we have named him Captain of the ship named *Concordia* (*Hendrick Frederick*), of 350 tons. He has been given very special orders and authority to seek said islands, to resist and make war, to oppose and cause as much damage as he can to the Spanish and Portuguese, and to all those who might want to thwart his orders. He is to comply with all the orders of the Admiral and Captain General Olivier van Noort and to carry out his commission, with utmost ease and promptness."

"We have ordered him to get as many people as he deems necessary and whatever the Admiral has ordered. These people are strictly ordered to obey and respect said Captain; to do all that is ordered them by said Admiral. He is to do everything expected of a faithful and good captain. In no way, is he nor any of his men, to do ill or harm to the subjects of His Imperial Majesty or to those of the King of France, England, Scotland, Denmark, Sweden and Poland, nor of those of the Princes of the Empire, of others who are friends of these provinces and adherents of the true Christian religion. We entreat and demand therefore, all said kings and princes and other republics and persons with whom said Isaias Lande might get in contact with, to acknowledge him as captain. We expressly order all admirals, colonels, captains and other men of war, by sea or land, and others who are under the government and the obedience of these provinces, to do likewise and allow him with said ship, not only to go and negotiate wherever it be, and whenever it be necessary, but to favor him and grant him any favor, help and sustenance, this will give us singular pleasure. We will serve him in such occasions and our men will do as they are obliged to." Dated 12 May 1596 in Holland,

Maurice de Nassau (Archivo de las Indias Seville) 93

After the confrontation between the Spaniards and the Dutch, van Noort sailed to the Strait of Malacca and made his way back to Holland aboard the *Mauritius*. He arrived back home in Rotterdam on August 28, 1601. He was well received in Holland for his exploits in Asia even though he had not brought back much in the way of valuable cargo. After a time in Rotterdam, he wrote a book entitled "Description of the Arduous Voyage," in which he recounted the battle with the Spaniards in Manila Bay. He served in several naval campaigns organized by Maurice of Nassau, Prince of Orange. He sold his tavern in Rotterdam and retired to a quieter life with his wife. He died in 1627.

Commander Olivier van Noort became well known as the first Dutchman to circumnavigate the globe from 1598 to 1601. In a letter he wrote in 1601 to Dutch government officials, he asked to be released from having to pay 600 guilders to help the poor. Apparently, he had promised to pay the 600 guilders to the merchants who financed his expedition, but as the voyage was unsuccessful, he wrote that he was without resources and could not make the payment. The following is his statement.

"Olivier van Noort, a native burgher son of this city (Rotterdam) . . . has made with four ships for three years a great and very perilous voyage, and passing through the Strait of Magellan, has sailed around the world, and discovered as well the West as the East Indies, traversing sundry remote and strange islands, never before (as far as known) visited by anyone. And since you noble Lords (like also some other cities) have furnished two cannons for the promotion of that voyage and for his defense against the Spaniards and Portuguese (these lands' sworn enemies, who in their tyrannical design always try to thwart such voyages), the suppliant (van Noort) had promised a sum of six hundred guilders on behalf of the poor, in the hope that the intended voyage would be a great success. Now having returned the guns, he is sincerely willing to help the poor (if he were able), but the suppliant with his entire company has encountered so many reverses and struggles, not only with weather and wind, but also with the aforementioned enemies of our lands, that conceivably never anyone on a like voyage has experienced more perils, miseries and loss of ships, of property and life than the suppliant, as will be evident from his credible journal, partly issued and yet further to be published."

"Thus he had, with loss of his worldly welfare and goods, and without earning any salary, reaped nothing but the honor which such a voyage merits and for which others have been rewarded by kings, princes, and lords, especially since this undertaking has inflicted such great losses on the general enemy that other subjects of these

provinces have already tasted the fruits thereof and will gather even more of them. The credit also belongs to this city and his fatherland, and the suppliant presents it humbly to the government, Nobles and others who ought to defend it justly against anyone who, from stupidity or too great an affection for the king of Spain, would besmirch this honor. Offering to this purpose to give the Council or its appointed committee such report of this commerce and adventure that the suppliant does not doubt that you will be so pleased that his slanderers (if there might be any) will receive little credence. And since the honor earned is worth more to him than any worldly goods he is willing, and indeed compelled by misfortune to maintain it by serving his country under a prince or lord."

"Although the suppliant does not doubt that you gentlemen, in view of suppliant's devoted service, and noting his steadfastness in promoting the common weal in spite of diverse misfortunes that have befallen him everywhere, will not insist at present on his promised subsidy for the poor, but will want to release him, as others have already done, the suppliant shall nevertheless (if fortune turns) neglect nothing to fulfill this obligation, so as to gain peace of mind in sincere devoutness before God and you gentlemen. Thus the suppliant requests respectfully your decision and gracious favor, recommending himself to same, which doing etc." Signed by Olivier van Noort [94]

The Spaniards of Manila, on the other hand, began investigating the incident. The survivors of the *San Diego* accused Dr. Antonio de Morga, who was able to survive the sinking of the galleon, of incompetence, but he managed to avoid prosecution. Instead, he returned to Mexico City where he served as a judge in the Holy Inquisition for ten years. While in Mexico City, he wrote his book "Sucesos de las Islas Filipinas," which was published in 1609. The book contained a brief and watered down version of the battle with the Dutch. It was his attempt to minimize his role in the conflict and the loss of the galleon. Eventually, he was reassigned to Ecuador in 1615, where he served as the country's governor and president of the Royal Audiencia in Quito. He died in Quito on July 21, 1636.

Archaeological Remains of the *San Diego*

After combating the Dutch for six hours from 8 am to 2 pm, the *San Diego* may have been damaged by deadly cannon fire or sank due to its overloaded condition. Some accounts state that there may have been a leak in the hold, but it would have been difficult finding and repairing it as the hold was crowded with cargo and weaponry. Why the ship sank still remains a mystery to this day. In any case, the site where it lay for many centuries, at the bottom of the sea, was located by archaeologists off the coast of the small island of Fortuna, south of Manila Bay.

The wooden remains of the ship were uncovered and included parts of the hull, frame, planks, two bilge pumps, as well as parts of the ship's stern, rudder and rudder blade. When the archaeologists arrived at the site, a portion of the ship's hull and rudder were covered over by ballast. The ballast consisted of numerous stones which were protecting the remains of the stern portion of the vessel. The heavy Chinese jars which were uncovered at the site also acted as ballast for the ship.

When the *San Diego* sank, she landed on her port side. Most of the recovered ballast was found in this area of the ship. The recovery of a part of a ship's wooden hull, during excavations conducted on other shipwreck sites around the world, has frequently been possible due to the fact that the vessel's ballast often covered the timber when it sank. Luckily, the ballast protected and preserved parts of the vessel from deterioration caused by sea worms and other organisms. This was also the case with the *San Diego*. The recovery of the timber provided a host of information concerning the types of woods used by the Spanish shipwrights and the methods they employed in building the ship during the sixteenth century. The tropical hardwoods used in the ship's construction were strong, durable, insect resistant woods. As a result of these findings, the archaeologists were able to come to some definitive conclusions regarding the ship's construction.

The shipwrights who built the *San Diego* used the naval construction designs and methods employed in Spain during the sixteenth century. The ship was, "Constructed according to plan, which was traditional for the period, of an assembly of lateral floor timber/futtock/top timber, the frame thus required, during the study, the detachment of the futtocks and the top timbers. The analyses (of the timber used) identified six species or five if we classify the two types of Terminalia identified as a single species of tree. All these species are Asian flora, and are still well represented in the Philippines. "[95]

The hull measured 57 feet in length and its keelson was composed of one entire beam of wood. After removing the ballast, the archaeologists found the keel and a keelson. Attached to the keel was the stern post with the attached rudder and rudder blade both intact. The rudder and blade were connected to each other and to the stern post through the use of pintles and gudgeons, which were extant and still visible. At this point it was possible to envision the shape of the vessel from the remains of the ship's stern.

At the Cavite shipyard, we know that there was a foundry where iron pins and other items were produced for use by the shipwrights in the construction of both galleons and galleys. Most likely, as the *San Diego* was built at the Cebu shipyard a foundry would have been located there. The iron pins used in the construction of the vessel may

have been produced at the Cebu foundry or perhaps they were shipped to the smaller shipyard along with other supplies from Cavite.

The Keel and the Keelson

Remarkably, the keel was preserved. It measured 77 feet 9 inches in length and extended from the stern of the vessel to the stem and consisted of one long beam of a Philippine tree known as Bitaog (Calaophylumm inophylum L). As it is a tall, straight growing tree, it can reach as high as 131 feet in length. It was perfectly suited to serve as the ship's keel, which in the case of the *San Diego*, it was used as a single beam for this purpose. An advantage to using the tropical medium hardwood as a keel was the fact that it was difficult for sea worms to bore into the wood and it aged well. Although the Bitaog was difficult to cut and plane, it was used in the construction of ship's frames, rudders and ceiling plates.

Lying above the keel was the keelson. The long rectangular shaped keelson was broken into three pieces even though it was originally one long beveled beam of wood. It measured 57 feet 6 inches in length, and an area within this beam served as the mortise and tenon joint configuration for the mainmast step. This was basically a space cut into the wood where the mainmast sat. Using metal pins, the *San Diego's* master carpenter had connected the timbers and the keel to the keelson. There was an area where a possible second mortise for a mast was cut into the keelson, but the master carpenter changed his mind about continuing with this indentation into the keelson. This is interesting, as it appears that the shipwright involved in the construction of the vessel was not so confident with his calculations. This error may have led to other problems during the construction of the vessel which, in turn, may have contributed in some way to its sinking. As there is no clear indication as to why the *San Diego* sank, it may have been due to a mis-calculation when the vessel was constructed. Other smaller steps were constructed on the keelson to support the beams holding up the ship's lower deck.

The wood used for the keelson was a durable, strong and insect proof tropical hardwood known as Terminalia microcarpa decne of the genus Combretaceae or its common name in the Philippines is Kalumpit. This wood is still used in the country in the construction of boats, house posts and the production of furniture. As an indigenous tree of the archipelago, it is similar to other native trees such as Narra and Molave. They were all used at the Cavite shipyard in the construction of the galleons and other sea vessels. Wood was nailed to the keel using treenails (pegs) and iron nails, which were imported from China and Japan for this purpose.

It was a common practice in Spain and in the Philippines for the shipwright to go into the forest and search for particularly shaped and

curved pieces of wood he could use in the construction of the galleon. He often took samples of the shapes and curved pieces with him in order to find the types of wood he needed.

The Rudder and Stern Post

As the ship sank on its port side it was covered and preserved by ballast. As a result, the rudder and stern post of the ship were both intact when the ballast was removed. The discovery of the rudder is a very important find as it provides an insight into how the shipwright constructed this portion of the ship, as well as how the vessel was maneuvered. The rudder was connected to the hull by iron pintles located on the rudder blade which were slotted into iron gudgeon holders on the hull. The whipstaff was moved right or left by the helmsman in order to control the tiller which was, in turn, connected to the rudder blade. But in the case of the *San Diego*, only the rudder, its blade and the stern post were uncovered at the excavation site. The ballast had preserved the rudder, pintles, gudgeon, stern post configuration astonishingly well.

The rudder was constructed of a strong tropical hardwood, Madhuca Betis Macbr or Betis, as it is known in the Philippines. “Its great strength means that it is still frequently used by carpenters, in particular for the construction of jetties, bridges and foundation plates. It also has the reputation for resistance to attacks by termites and shipworms. The three elements which made up the rudder blade are at the same angle as the stern post and at the base, were not corrected to the horizontal. The base of part three in the stern was therefore raised and projected below the longitudinal axis of the keel, an architectural characteristic already observed on the wreck of the Dramont H. When it hit the bottom, the base of this part pushed the entire rudder practically out of its braces. The three parts were held together by three pins and are held in place longitudinally by two reverse-slope skew scarf joints.”[96]

Another discovery was the fact that with the remains of the rudder and stern post, it was possible to determine the vessel’s rake (the degree of overhang of the bow and stern). “On the *San Diego*, the preservation of the base of the stern post made it possible to calculate its rake, which was 60 degrees. This angle formed on the outside by the longitudinal axis of the keel and the axis of the stern post is to our knowledge the lowest rake ever recorded on an archaeological site or mentioned in the treatises on shipbuilding. In only one other case in the world, on the wreck designated *Dramont* H81 (Roman vessel dating from AD 40-50), near Saint-Raphael (French Riviera), excavators measured the same angular value for the rake of the stern post. Apart from these two wrecks, the closest value was that recorded on the *San Esteban* (shipwrecked near Padre Island, Corpus Christi,

Texas in 1553), i.e., estimated between 75 degrees and 78 degrees on the *Lomelina* (shipwrecked in 1512 France), and calculated between 72 degrees and 73 degrees on the *San Juan* (shipwrecked in 1565 in Canada), the recommended rake is from 65 degrees to 70 degrees in Palacio (in his treatise on galleon navigation in the sixteenth century), 70 degrees to 72 degrees in Mathew Baker, 77 degrees in Oliveria, and fluctuates between 79 degrees and 82 degrees in Manual Fernandes. "[97]

The shipwright searched the forest for a strong beam of wood he could use as the stern post. "Another point which was also postulated by Joao Baptista Lavanha was the fact that in ship construction it was necessary to ensure that the stern post was strongly connected to the keel. It was considered one of the most crucial elements in shipbuilding to ensure the integrity of the vessel. As he stated, The stern knee which is the connection to be made between the stern post and the keel is made all in one piece because it is one of the principal parts and is of the greatest importance for the ship." [98]

The Frame

The archaeologists found that fifty-two floor planks and crutches were still extant at the excavation site. Bitaog wood was used for the planks. As the archaeologists described their findings they said, "This generally good preservation of the bottom also made it possible to identify the mid-ship floor, which is very important for an understanding of the site, because it sets the interval for the construction of the frames. The frames were assembled by laterally overlapping the floor timber, futtock and top timber. There is nothing unique about the construction of the frame. A similar construction is frequently found on wrecks from the eleventh century. The process of (assembling the frame) means that the floor timbers are always facing the mid-ship floor is, so to speak, conventional. It is employed on almost all the wrecks found so far, with the notable exception of *Lomalina*. This reversal and the study of the hull have shown the role of mid-ship frames of the two floor timbers. The number of floor timbers is practically in line with the instructions given by Oliveira, who recommends the use of two mid-ship frames for any ship with a keel between 15 and 18 rumos, i.e., between 19.71 meters and 23.65 meters. "[99]

"Five stringers, the purpose of which is to ensure the longitudinal cohesion of the hull, were found in place on the hull, three on the port side and two on the starboard side. Close to the keelson they are unique in that they are butt-jointed. Ethno-botanic analysis indicated the presence of two types of wood – Apitong (Dipterocarpus CF-Grandiflorus), and the two butt-jointed stringers are cut from a Terminalia SP very similar to the Terminalia microcarpa of the

keelson. The stringers are divided, apparently deliberately, into two groups which coincide very precisely with their functional grouping, probably a deliberate choice by the ship's carpenters who preferred Terminalia SP over Apitong for cutting the butt-jointed stringers, for technical reasons related to the characteristics of the different woods. Resinous, medium-hard to hard, solid, insect resistant and medium-density, Apitong grows in the forest in the form of large trees with very high branches and an almost perfectly cylindrical trunk. This tree, the heartwood of which is reddish-gray to dark red, is still frequently used in the Philippines because of its excellent strength in the manufacture of fence posts, beams, rafters, mine props, jetties and pilings. Boat builders use it for spar ceilings. It is much harder to cut with a saw. All the stringers are nailed laterally to the frame elements by two rows of nails, one row aligned along each edge. Cut from large trees, all the stringers are very long planks, and a single piece is almost 14.20 meters long for the stern element. "[100]

In regard to the caulking materials used to build the galleon at the Cebu shipyard, there is evidence that coconut husks was mixed with Pili nut oil to produce this material. In the *San Diego* excavation, it was found that the seams of the uncovered planks contained this caulking material. "Specimens of caulking were also taken for analysis. Until we have the definitive results of these analyses, all we can say is that preliminary observations have shown the use of a plant material. These initial indications must be reconciled with the testimony by Captain Lope de Rada, who in January 1601 told the official investigating commission that the crew had been unable to plug the holes blasted by the Dutch guns because 'el bonote que es con lo que se tapa que sirve de estopa lo echo a la mar' (translation: 'The coconut fibers which was used as caulking had been thrown overboard.') Also mentioned by other archival sources, the use of coconut fibers for caulking seems to have been the practice by Spanish shipbuilders in the Philippines. Therefore it would not surprise us if the analysis ultimately confirms the use of coconut fibers to caulk the *San Diego*. "[101]

Weaponry

One of the most important archaeological finds contributing to the overall understanding of the types of weaponry found on the Manila galleons was the evidence uncovered at the underwater archaeological excavation of the *San Diego*. In addition to the numerous artifacts found at the site, the recovery of cannons and other weaponry provides an insight into the artillery used by the galleons during the sixteenth century.

"In December 1600, it would appear that the *San Diego* carried state of the art artillery at least in terms of what was available in the

Philippines. It carried only bronze cannon, and most of them were of relatively recent design. The information the wreck provides is even more valuable because the context is extremely rich. The archives provided us with the categories and nomenclature of the 14 guns on the *San Diego*, nomenclature which we were able to validate on the basis of the excavation. The guns, moreover, turned out to be in very good condition in spite of four centuries on the bottom. The *San Diego* therefore merits more detailed study because we have so far only been able to study the cannon while they were undergoing restoration. In any case, we can draw a provisional layout of the ordnance, both as to the type and location of the individual weapons."[102]

In addition to its own complement of weapons, which would have included cannons, Dr. Antonio de Morga, had the vessel equipped with additional cannons taken from Fort Santiago in Manila to strengthen the ship's military capabilities. The additional weaponry was listed in a manifest prepared by the Royal Arsenal at the Cavite shipyard and dated July 12, 1600. In the manifest, the weaponry added to the *San Diego* included fourteen artillery pieces. [103]

1 Bronze Culverin (culebrina) long cannon shoots 16 pound iron balls.

1 Demi-cannon (medio canon) shoots 12 pound balls.

4 Sakers (sacre) cannons shooting 5 and 8 pound balls.

3 Demi-sakers (sacre) also known as demi-culverin cannons shooting 3 pound balls.

1 Falcon de Servido (Spanish name for powder casing) also known as falconet shoots 3 ½ lead balls.

2 Falcons (cannons) shooting 2 pound balls.

2 Portuguese Pedrero cannons shooting 5 ½ stones (one is actually a verso swivel gun).

The ship's smaller weapons would have been distributed along the port and starboard sides of the main deck and in the stern superstructure and the prow forecastle. Cannons were positioned on the gun deck and there would have been chasers at the bow and the stern. One of the cannons, listed in the manifest was a large culverin (culebrina), which was found at the shipwreck site. It was a formidable weapon of the time and would have caused much destruction during battles against enemy vessels. As the largest cannon used by the Spaniards, the heavy bronze culverin with its very long barrel measured about 14 ½ feet in its original state, which deteriorated somewhat during the centuries it was under the sea. It weighed 2,288 kg and had a bore diameter of 133 mm. It was used by the Spaniards to shoot 16 pound iron balls at the Dutch vessels in Manila Bay. When it was found by the archaeologists, it was discovered that the gun had no ornamentation and was designed

rudimentarily to serve a primary purpose as a major weapon. The only distinguishing features of the gun was the trunnions (rope lugs) on either side of the culverin's mid-section or second reinforce area. Another interesting feature of the long culverin is the fact that the gun's barrel had been shortened before being placed on the *San Diego*. Whether or not the gun was shortened on purpose to fit it on the vessel or if it was in this condition when it was taken aboard the ship, remains unclear.

The parts of a typical cannon consisted of the cascabel (the knob at the closed end of the gun), followed by a ring known as the breech. The barrel of the gun was divided into three sections: the first section is the "first reinforce" (where the vent is located and through which a lit lint stock sets the gunpowder cartridge off firing the gun). The next area is the "second reinforce," where the trunnion rope lugs are located and on some guns one might see dolphin decorations placed here. From this area to the end of the gun and the muzzle opening through which the gunpowder and ball are shot is the "chase."

When a gunner fired a cannon the procedure was carried out in a number of steps which included the following, "The first step was to insert the cartridge of gunpowder into the barrel with the gun ladle which is a long pole with a scoop like metal end. Next a piece of wadding was pushed in with the rammer - a long pole with a flat rounded end. This was followed by the shot and a second piece of wadding. The usual shot was an iron ball, which could hole the hull of an enemy ship. Bar shot and chain shot were fired higher to break masts and rigging. To fire the gun the captain of the gun crew pushed his priming wire through the touch hold to prick the cartridge. He then filled the touch hole with powder from his horn and lit it with the slow burning cord on his lint stock. The hand spike was used as a lever to aim the gun and the sponge for cleaning the barrel. "[104]

During the sixteenth century, several types of artillery pieces became popular. These were long and short models of the class of guns known as culverins (culebrinas). Also considered weaponry under the culverin category was another group of guns referred to as sakers (sacres) and falcons. The long barreled culverin found at the *San Diego* site, was considered the most important weapon in this category of guns. The balls shot from the culverin ranged from the 1 to 16 pounds. In the shorter gun category, there were guns which were referred to as simply "cannons."

Another interesting cannon found at the *San Diego* site has been labeled a Portuguese pedrero with a powder casing (falcon de servido), but may in fact be another type of gun known as a "verso (pasavolante)." The versos were produced by both the Spaniards and the Portuguese in the latter part of the fifteenth century. They were

initially made of wrought iron and then later on in bronze. They continued in popularity into the sixteenth century due to their tactical efficiency. In the case of the verso found on the *San Diego*, the swivel gun measured 4 to 6 feet in length and usually fired 1 to 8 ounce balls and it was known as being both a breech and muzzle loaded cannon.

The versos had a removable iron container housing the gunpowder that was then placed into a holder or cradle, which was part of the gun and located at its breech end. As it was loaded using the removable cast iron or bronze chamber it was often equipped with two or three additional chambers, which could be used in rotation allowing for quick firing one after the other. The bore diameters were usually smaller measuring from two to eight inches. Earlier versos had a series of hoops covering the barrel. Another characteristic of the versos was the fact that they stood upon a swivel-post where it was mounted allowing the gun to be adjusted for height and direction.

The Spaniards used a number of guns which were classified under the verso family according to their sizes. These included the versos, esmeriles, versos dobles and the ribadoquines. The *San Diego* verso weighed 400 kg and had an overall length of 575 mm. Its knob at the breech end, the cascabel, is missing although the versos had longer iron or bronze projections from the breech possibly to aid in aiming the gun. On the powder casing of this gun is an emblem which identified the cannon as being of Portuguese origins.

The wooden gun carriages used with the cannons have not been found in the archaeological site. The earliest gun carriages were two-wheeled devices used to position the cannon out of the gun port. They resembled the type of cannon carriages used defensively in Spanish forts and on city walls. These were replaced by four-wheeled carriages in the 1630s.

Other weapons found at the *San Diego* site included:

1 Portuguese Pedrero cannon with a bore diameter of 173 mm. The gun fired a stone ball weighing 5.5 kg and its length was 2.57 m and weighed 741 kg.

1 Demi-cannon (medio-canon) fired a 12 pound ball. The cannon weighed 1,441 kg and its length was 2.79 m.

1 Demi-culverin fired an 8 pound ball. The cannon's length was 3.54 m and it had a bore diameter of 102 mm. The demi-culverins as a class of guns usually weighed from 3,000 to 4,000 pounds and fired balls weighing 7 to 12 pounds.

1 Saker (sacre) fired a 5 pound ball and its length was of 2.78 m. A portion of its barrel was sawn off. Its original length would have been 2.96 m and it weighed 947 kg. The sakers as a class of guns generally weighed from 1,700 to 2,400 pounds and fired a 5 to 6 pound ball.

1 Saker (sacre) fired a 5 pound ball. It weighed 920 kg and its

length was 2.95 with a bore diameter of 93 mm.

1 Saker (sacre) fired a 5 pound ball. It weighed 961 kg and its length was 2.94 m.

1 Saker (sacre) fired a 3 pound ball. The cannon measured 2.98 m in length and it had the manufacturer's signature of Remigy de Halut (a weapon designer) of the Malines foundry. The gun weighed 894 kg. The Malines foundry was located in Malines, Belgium. During the sixteenth century, this company was a well known weapons manufacturer. The Spaniards were obviously purchasing weapons from the manufacturer. Weapons made by the company were also employed by the Spaniards during the Spanish Armada.

1 Demi-saker (medio-sacre). The gun fires 3 pound balls and its length was 2.58 m. It has a bore diameter of 76 mm and weighs 610 kg. The 1598 gun has the coat of arms of Philip II.

1 Demi-saker (medio sacre). The gun's length was 2.72 m and weighed 706 kg. Its bore diameter was 75 mm. The gun was signed by Cornelis Pastenhaken of the Malines foundry in Belgium and dated from 1533.

1 Falcon (known by the same name in Spain). The gun fired 2 pound balls and weighed 492 kg. Its length was 2.25 m and bore diameter is 68 mm. The gun has been dated from 1598. The falcon class of guns usually weighed from 700 to 900 pounds and fired a 2 to 4 pound ball.

1 Falcon. The gun weighed 469 kg and it had a bore diameter of 65 mm. The gun was signed by Remigy de Halut of the Malines foundry. [105]

The archaeologists were able to provide an analysis of the types of cannons taken aboard the *San Diego*, which provided additional information on their total weight and how they were used on the ship. "We can now make several comments on the composition of the weaponry. All of the artillery pieces together weigh 13.5 tons. If we add the carriages, of which we have found no trace, the artillery would have weighed approximately 20 tons, a small fraction of the tonnage of the *San Diego*. The guns selected seem generally to be long, heavy or even very heavy, in the spirit of the age. The additional weight itself would not have been a problem aboard ship. It may in fact have been an advantage, since the additional weight would reduce the recoil on a ship never designed to carry much artillery. The selection of guns is very diverse. Seven different categories are represented as well as 8 diameters of balls, not to mention the significant differences in bore we discovered, which would have required careful sorting of the balls to be used in the respective guns. On the other hand, there seems to have been some attempt to standardize the artillery in terms of the guns available because we find striking similarities between two sakers, two demi-culverins and two

pedreros. There is a wide variety of foundry patterns. This finding is the result of a study of various secondary points such as dolphins, flanges, brackets, ornaments and inscriptions. These differences result for the most part from the variety of founders and foundries, of which there were many in the Spanish Empire, the Spanish Netherlands, Italy (the kingdom of Naples and territories in Lombardy and Piedmont), and since 1584, the East Indies."[106]

Although the vessel was well armed with weaponry and equipment for use by the soldiers such as leather doublets, coats of chain mail, breastplates, helmets, shields, pikes, gunpowder and an assortment of ordnance, almost none of these remained in the shipwreck after centuries under water. Nevertheless, archaeologists found evidence at the shipwreck site of the weaponry taken aboard the ship including the cannons and stone and iron cannon balls of varying sizes, musket balls (for use in harquebuses), spring shot, a dagger handle, sword pommel, a rapier handle, helmets (morrions), sword hangers and Japanese sword guards, which shielded the hand from the sword's blade.

Interestingly, amongst the soldiers on the *San Diego* which included Spaniards, Filipinos and Chinese, the Spaniards had recruited Japanese mercenaries to fight alongside them against the Dutch. The Spaniards often asked the Japanese, who were living in Manila at the time, to work on the galleons or assist in quelling revolts by the Chinese and the Muslims in the archipelago. They had no qualms about fighting when asked to and were well paid for their services. Nevertheless, their bravery in battle was viewed by the Spaniards as both admirable and fearsome, and for this reason they were relegated to their own neighborhood where they were kept under observation by sentries posted on Manila's walls.

The Japanese samurai arrived in Manila as part of the retinue of noblemen who fled from Japan due to religious persecution. They had converted to Christianity, and as such, could no longer remain in Japan, as they could be arrested and executed by those who were opposed to the foreign religion. The Japanese Christians, who were from Japan, sailed to Macau and Manila with their families and retainers in search of sanctuary.

The Japanese sword artifacts indicate that samurai mercenaries were present on the *San Diego* galleon when it sank. The archaeologists found a number of samurai sword guards of Japanese origin known as "tsubas." The sword guards formed a main component of the katana swords and protected the user's hands. Although the actual sword blades have vanished over the centuries, the metal tsubas are beautifully decorated in floral motifs such as chrysanthemums. There were other artifacts which attests to the

presence of the Japanese on board the vessel and these consisted of an ink stone and blue and white water dropper. Both items are used in calligraphy or in the production of Oriental drawings.

Another artifact associated with swords, but in this case, those belonging to the Spanish dignitaries, are small sword hangers found at the excavation site. Again, the blades of the swords and their sheaths are missing, but the hangers, which were used by the Spaniards to hang their swords with its sheath from their belts, attest to their being aboard the vessel in its last moments. The hangers were popularly used by Spanish gentlemen in the sixteenth century as a type of fashion accessory. Made of either bronze or copper with a hook on one end, they were decoratively shaped to resemble circular medallions with reliefs of floral motifs, portraits and other designs.

Body armor would have been used by the Spaniards and soldiers on the ship. Evidence of this was the lone helmet (morrion) discovered at the *San Diego* site. The helmet, which weighed 3 kg, was made of copper with a characteristically high central ridge reminiscent of the headgear used in modern times by the Vatican's Swiss Guards. The soldiers would have also worn shields and breastplates, while the wealthier gentlemen aboard the vessel might have used chain mail and upper body armor to protect their torsos. Many of the various types of body armor then available in the sixteenth century came from manufacturers in Spain, Italy and Germany.

As a number of musket and harquebus balls were found at the *San Diego* site, we can assume that there were many of these weapons on the vessel. The guns have long deteriorated and disappeared from the shipwreck site, but the projectiles indicate the presence of many harquebuses and muskets. In Europe, the Medieval crossbow was replaced by the harquebus, which was a muzzle loaded firearm used from the fifteenth to the seventeenth centuries. It resembled a modern day rifle in shape, although its firing process was more like a small hand held cannon. As a hand weapon, it provided the soldier who used this weapon and who was known as the harquebusier with a more formidable gun during that time period. It weighed approximately 6 to 7 kg and consisted of a wooden frame with a 40 inch barrel with a flared end allowing it to be easily loaded. It also had a match holder, trigger and tumbler. A matchlock was used to fire the gun, which was a mechanism used to cock the gun and fire. To fire the gun the harquebusier braced the weapon on a standing forked pole. The harquebus was replaced during the sixteenth century by the musket, which was both lighter in weight and easier to use. It also provided greater accuracy than the harquebus.

Muskets were probably also used on the *San Diego* as a defensive weapon as musket balls were found at the shipwreck site. The musket

was a sixteenth century gun used primarily by soldiers in the infantry. It was a muzzle loaded long gun, which was fired from the shoulder like a rifle towards a single target within the range of fifty yards. On vessels such as the *San Diego*, the newer musket and the older harquebus guns were used defensively, but the harquebus was already considered an older gun and not as popular as it once was. The musket was also similar in shape to the modern day rifles and it consisted of a stock, butt, trigger, lock, breech, barrel, barrel bands, bayonet, ramrod and muzzle. The soldier using the musket was often referred to as a "musket man" or "musketeer."

Other weapons such as wooden pikes did not survive the centuries of being under water, but the soldiers of the *San Diego* were no doubt armed with them. It was standard practice to carry these weapons on sea vessels in conjunction with the use of the harquebus and muskets. The wooden pikes were used by soldiers on the ship during hand-to-hand combat, while musketeers reloaded their weapons.

The harquebus, muskets and pikes were important components of hand-to-hand battles between the Spaniards and their adversaries during the sixteenth century prior to the Spanish Armada of 1588, which changed how they viewed their weaponry. Before 1588, when attacked at sea the Spanish military strategy basically consisted of engaging the enemy by using their cannons as a prelude to boarding the opponent's vessel. The cannons were seen as an adjunct to hand-to-hand combat by the soldiers or infantry rather than viewing them as primary weapons. They did not use the cannons to destroy an enemy vessel, but only as a strategy towards boarding the vessel and physical combat between opponents.

The Spanish soldiers who were engaged in physical combat with their opponents had proven to be quite formidable and successful in using this military strategy. The Spaniards were confident that if they could get along side an enemy vessel, that they could fight their opponents and defeat them. However, during the Spanish Armada in 1588, they realized that their usual tactics of boarding an enemy vessel and fighting in hand-to-hand combat was not going to work during that particular military campaign. The British were aware of the Spanish tactics and stayed well away from their ships during this engagement in the English Channel. Consequently, the Spanish commanders realized that they had to depend on gunfire to attack the British ships and protect their own vessels. They also knew that their cannons had to be employed as their first line of defense. Through the use of the cannons, they could severely damage the enemy vessels while keeping their own ships at a distance from them. From this point onwards, a greater emphasis was placed on training the crews to use the cannons quickly and efficiently, but they also continued to

engage in mock boarding actions to prepare themselves for any eventuality.

"The larger guns of the fleet were rarely fired, while the expenditure of shot by smaller versos was prodigious. This is explained by the Spanish method of using naval ordnance during this period. Each Spanish gun was placed under the command of a ship's gunner, assisted by a crew of sailors and soldiers. Once the piece was loaded, the crew dispersed to their other action stations, leaving the gunner alone, clutching his burning match cord, waiting for the order to give fire. Spanish naval doctrine emphasized the collective firing of the ship's broadside guns immediately before boarding an enemy vessel 'in the smoke.' Given this tactic, there was simply no need to reload the gun until the action was over."[107]

In the Philippines, the galleons were provided with weaponry, equipment and supplies by the government. As mentioned earlier, Dr. Antonio de Morga, when refitting the *San Diego*, ordered the transfer of cannons from Fort Santiago to the *San Diego* to supplement the ship's artillery. Prior to 1600, weapons such as cannons were removed from the arriving galleons for use in the forts of the colony. Apparently, as the colony operated on a much smaller scale if compared to Spain and the settlements in the Americas, it may not have come under the close scrutiny of the House of Trade in Spain or the viceroyalty in Mexico City, which had jurisdiction over the Philippines. As a result, it was not uncommon for Spaniards in Manila to bend the rules when convenient.

Netting was used on the vessels to protect the masts and rigging against gunfire, as well as serving as camouflage for the harquebus shooters and musketeers who fired shots at the enemy from in between the openings in the netting. The netting was draped over the sides and across the vessel from stem to stern to intercept incoming projectiles.

The weaponry found at the *San Diego* shipwreck site has provided an insight into the artillery used by the Spaniards during the sixteenth century and particularly in the Philippines. As so few galleons have been discovered and archaeologically excavated, the artifacts found at the *San Diego* archaeological excavation site provide an invaluable source of information for future researchers involved in the study of the Manila-Acapulco galleons.

The Artifacts Found on the *San Diego* Galleon

Although the *San Diego* was used as a battleship, there were a number of artifacts which were used on a daily basis in Manila households and were found at the excavation site. They provided an indication of the types of Chinese exports shipped to Acapulco each year on the galleons. These included a vast array of ceramics,

porcelain, earthenware jars, metal objects and cutlery. Due to the fact that almost 28,000 artifacts were found at the site, it may be possible that some of these artifacts had been destined for trade markets in the Philippines. As the vessel was initially an inter-island merchant vessel, it had never participated on the galleon route to Acapulco, but only sailed to ports in the Philippines.

When Dr. Morga rushed to prepare the vessel for the upcoming battle against the Dutch, he may have left some of its cargo in the hold rather than off-loading it in order to save time. In an attempt to expedite the process of revamping the merchant vessel, some percentage of the artifacts found at the shipwreck site may have been cargo goods rather than the personal possessions of those aboard the vessel. Consequently, the vast number of artifacts uncovered by the archaeologists probably consisted of a combination of trade goods and personal possessions of those aboard the ill-fated ship. Within the artifacts uncovered there was a large number of Chinese ceramics of varying sizes and designs. It seems implausible that they all belonged to the officers and passengers on the vessel as there were just too many of them. The ceramic artifacts found at the excavation site, clearly indicates the sort of ceramics which were transported on the galleons and for sale in Acapulco. The ceramic and porcelain artifacts found may have been only a small percentage of this type of export carried by the ship when it sank.

There was evidence that some of the artifacts were in fact the personal possessions of the individuals on board the vessel. These included 184 Chinese produced earthenware glazed jars, which had the initials or distinguishing marks carved onto the jars of their owners. It was a standard practice at the time in the Americas and in the Philippines to place one's initials or distinguishing marks on personal possessions carried on the vessels as a way of identifying to whom they belonged during the journey.

The jars would have been used to carry provisions for their own personal use while aboard the vessel. Apparently the Spaniards of Manila preferred using the jars rather than wooden barrels to transport their foods and liquids. They were filled with water, oil, vinegar and olives or pickles. It was also a common practice to carry hundreds of jars for water on the journey, so finding them in an excavation would not have been surprising especially for transpacific galleons. Some of the recovered jars contained the remains of food such as pork bones, brine used in pickling and salted pork.

The artifacts also included 433 fine porcelain items and shards of Chinese blue and white tableware, such as large plates, dishes, bowls and cups. There were also a number of jars (of various sizes), covered jars with lids, kendi (a type of bottle with spout), bottles (of various

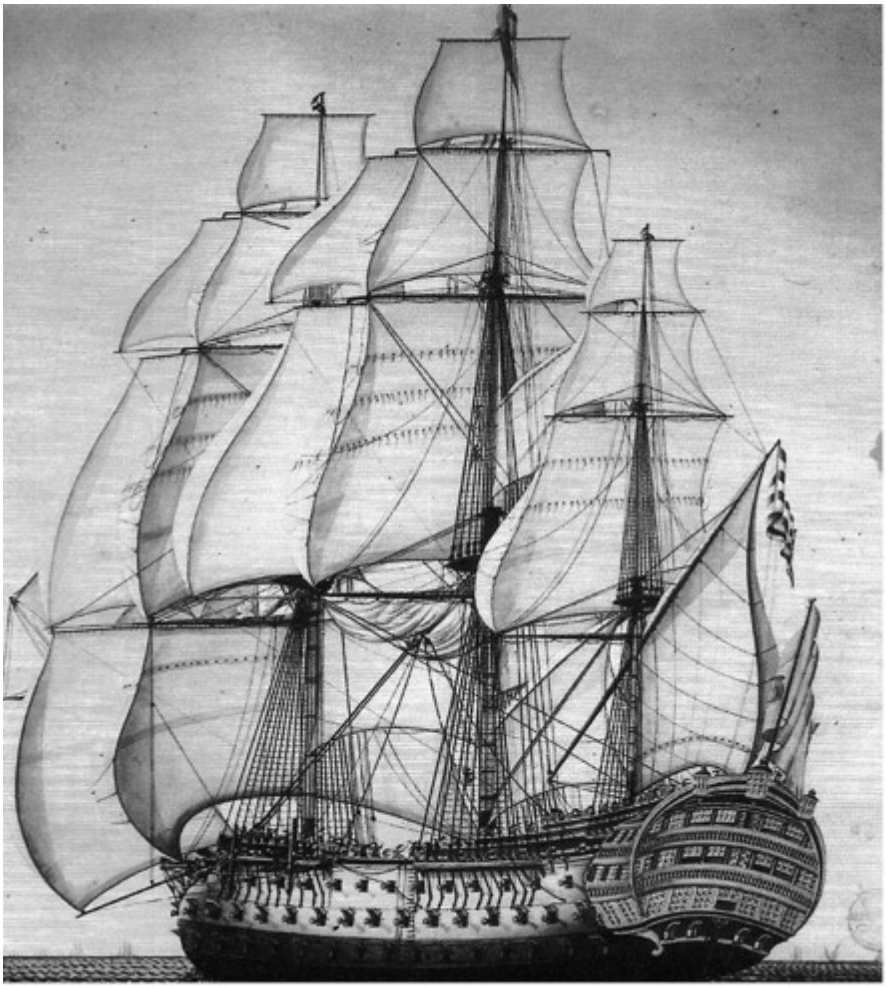
sizes), double gourd bottles, double gourd vases, boxes (of various sizes of the type used for condiments or sweets), small jars (may have been used for oil or vinegar), and covered bowls with lids. The porcelains dated from the Ming Dynasty (1368-1644) and the Wanli Period (1573-1619), and represented the type of fine porcelains shipped to Mexico on the galleons. In Holland, where similar types of Chinese porcelains had been sold by Portuguese merchant vessels, the Dutch called these pieces “Kraak” ware as they were transported on Portuguese ships, which were known as “carracks.” In European markets, and in the Americas, the Chinese porcelains were immensely popular items and greatly sought after by customers in both continents.

Several artifacts provide evidence of the existence of the individuals on the vessel and these included candle holders, jewelry, glass goblets, silver cutlery, a rosary, an inkwell, game pieces, bronze mortar, locks, keys and shoe buckles. Moreover, ninety-three skeletal remains were uncovered of the men who bravely loss their lives on the *San Diego*.

Twenty-eight Filipinos move a Spanish ship's anchor to a new location in the Philippines.

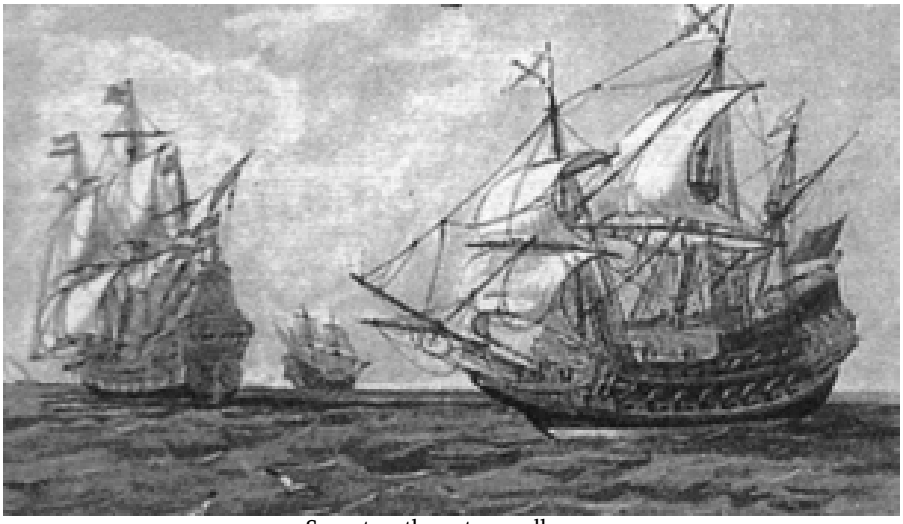
The anchor was discovered by Filipino archaeologists in Donsol, Sorsogon.

The Galeon *Andalucia* arrived in Manila from Spain in 2010. The ship is a replica of a Manila galleon.

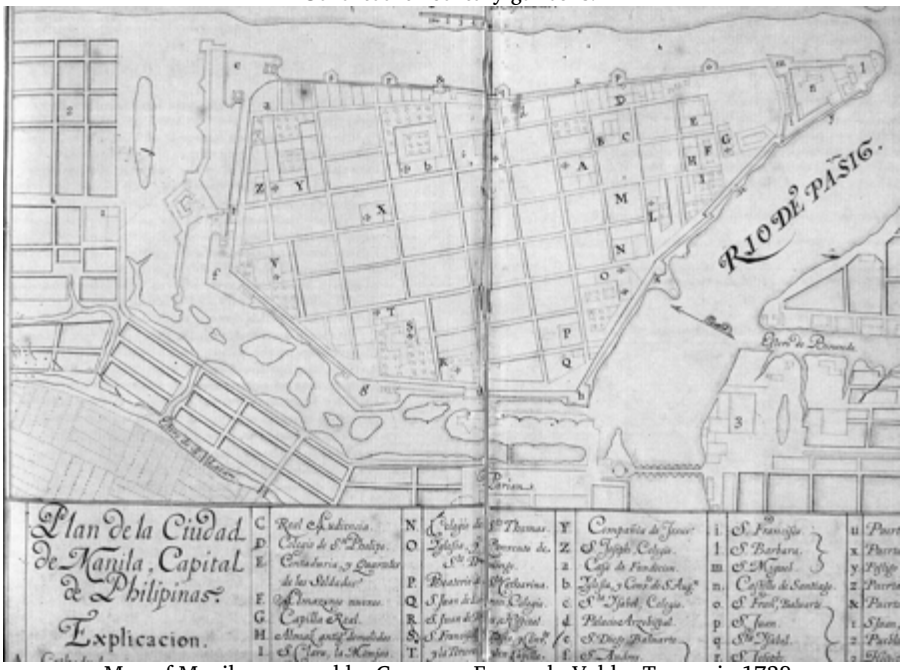


Eighteenth century Spanish warship galleon.

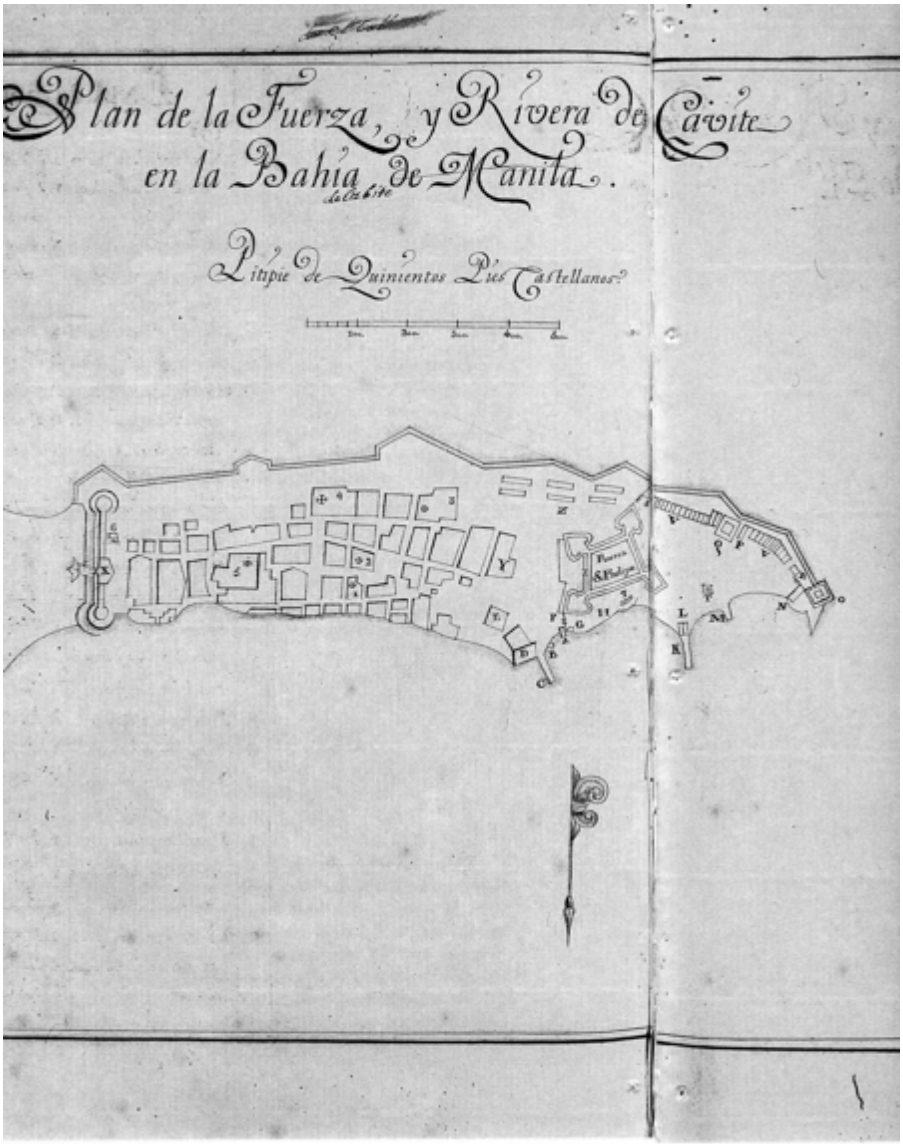
A ship's cannon from the visiting Galeon *Andalucia* 2010.



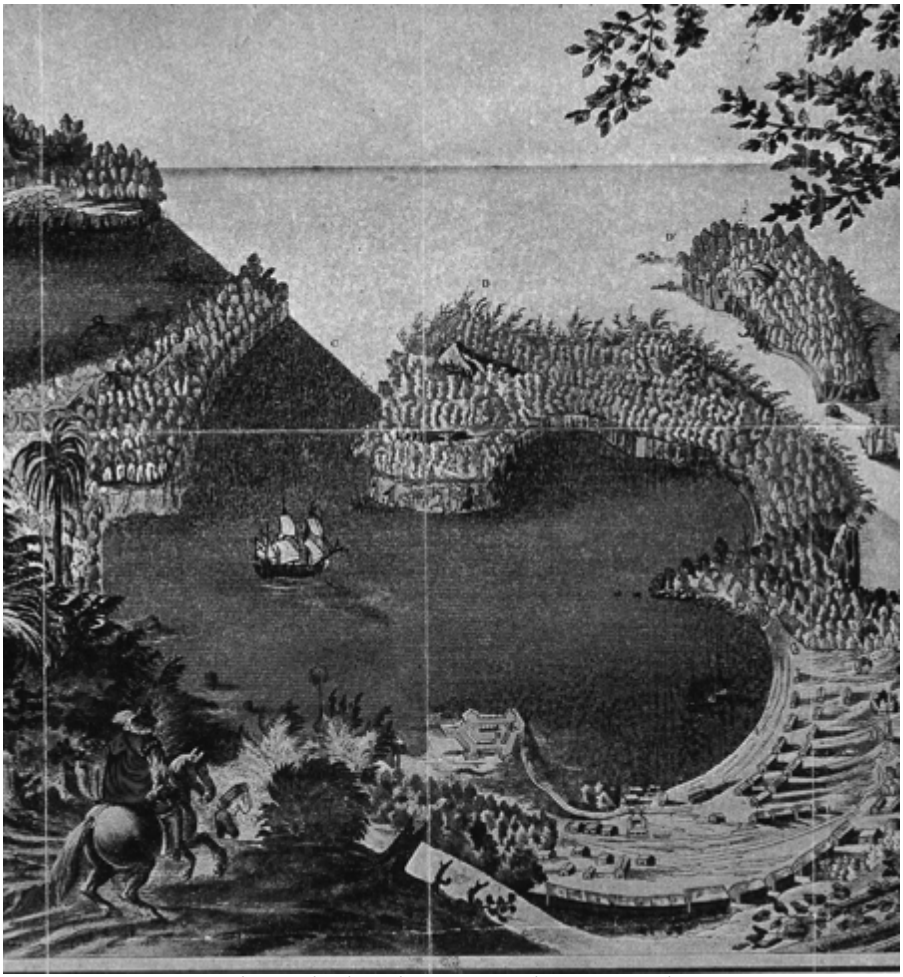
Seventeenth century galleons.



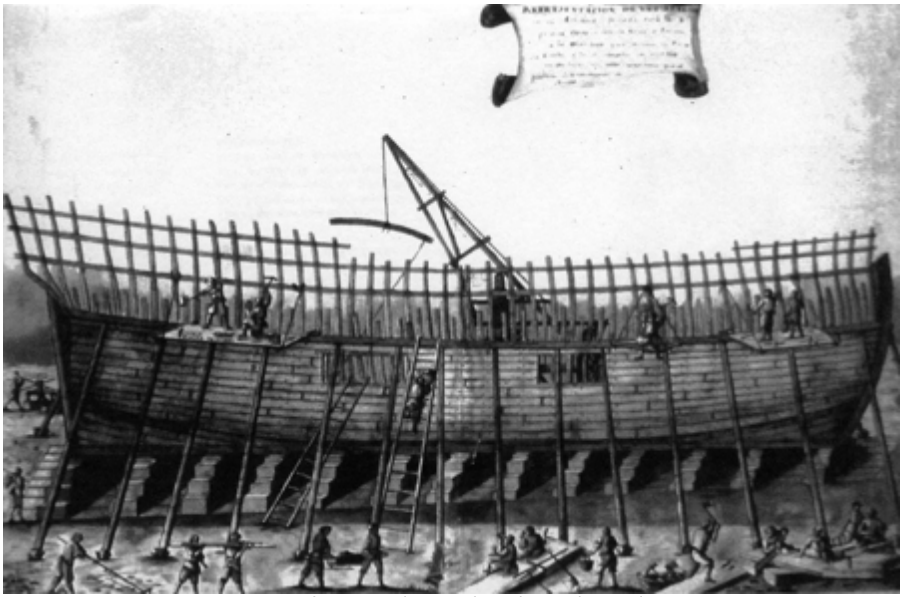
Map of Manila prepared by Governor Fernando Valdes Tamon in 1738.



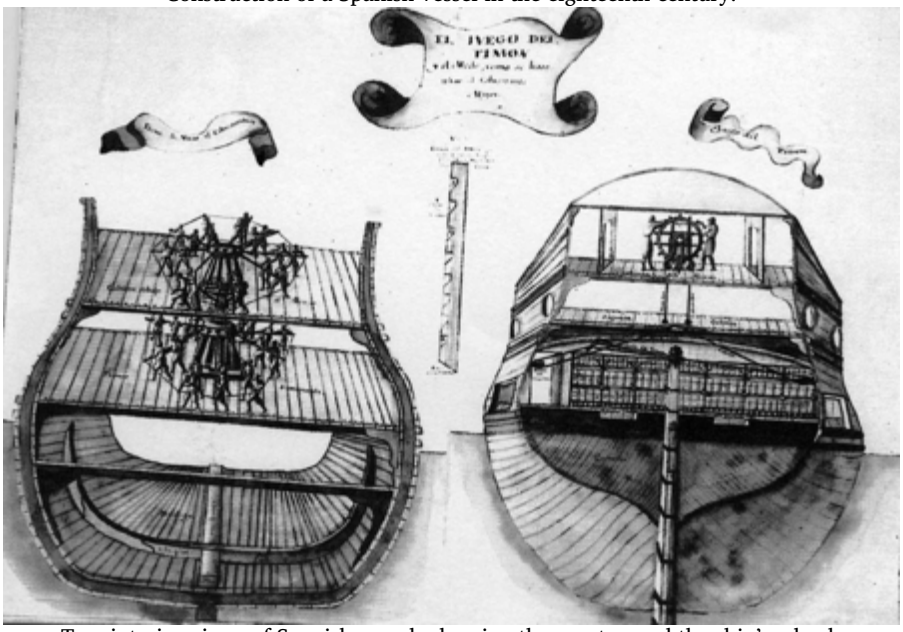
Map of Cavite and its shipyard 1738.



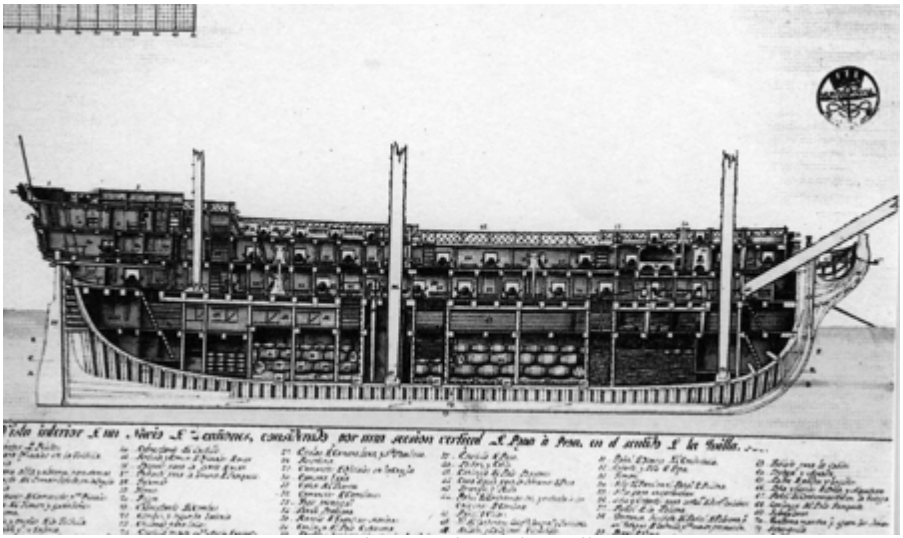
Painting of Acapulco by Adrian Boot in the seventeenth century.



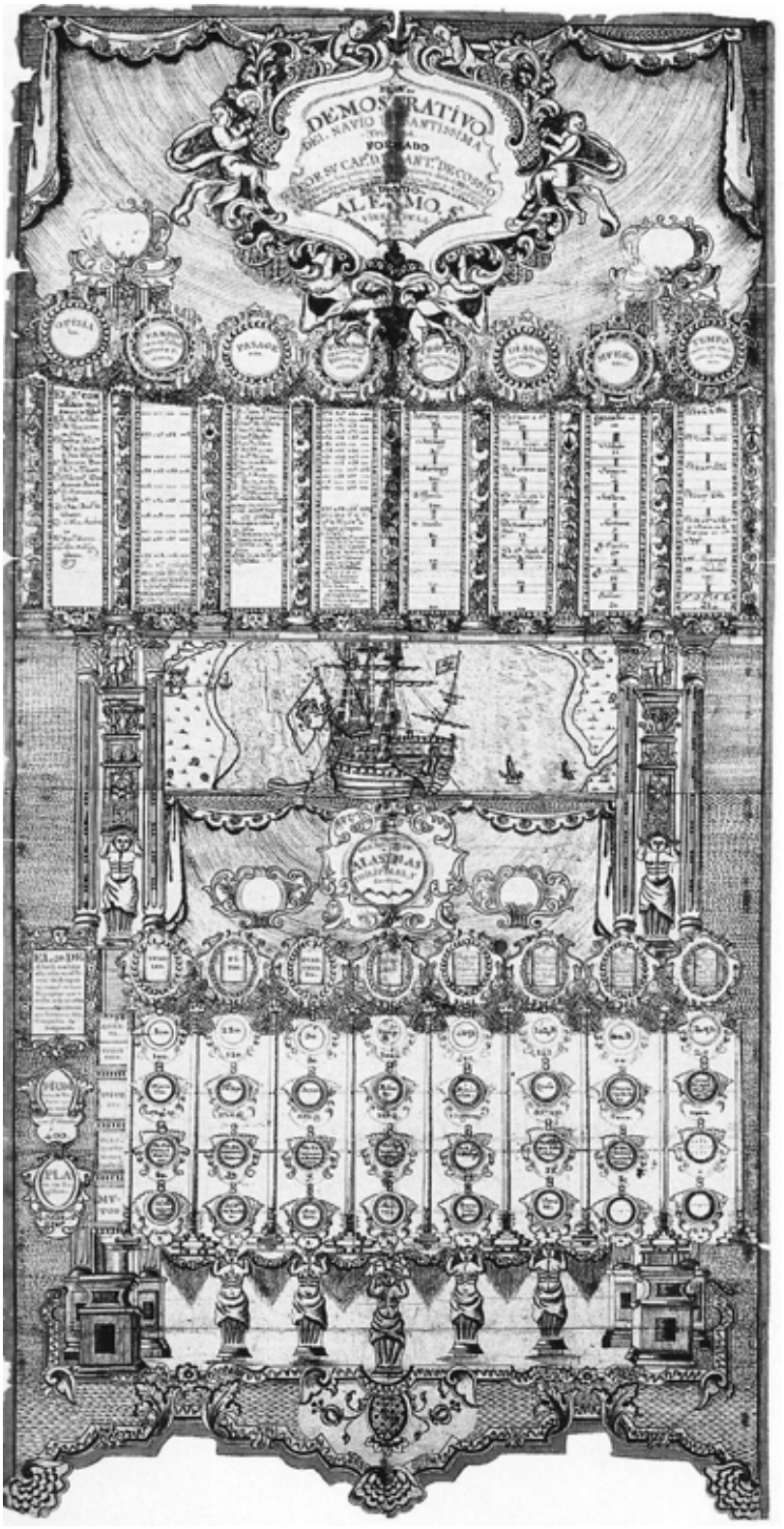
Construction of a Spanish vessel in the eighteenth century.



Two interior views of Spanish vessels showing the capstan and the ship's wheel.

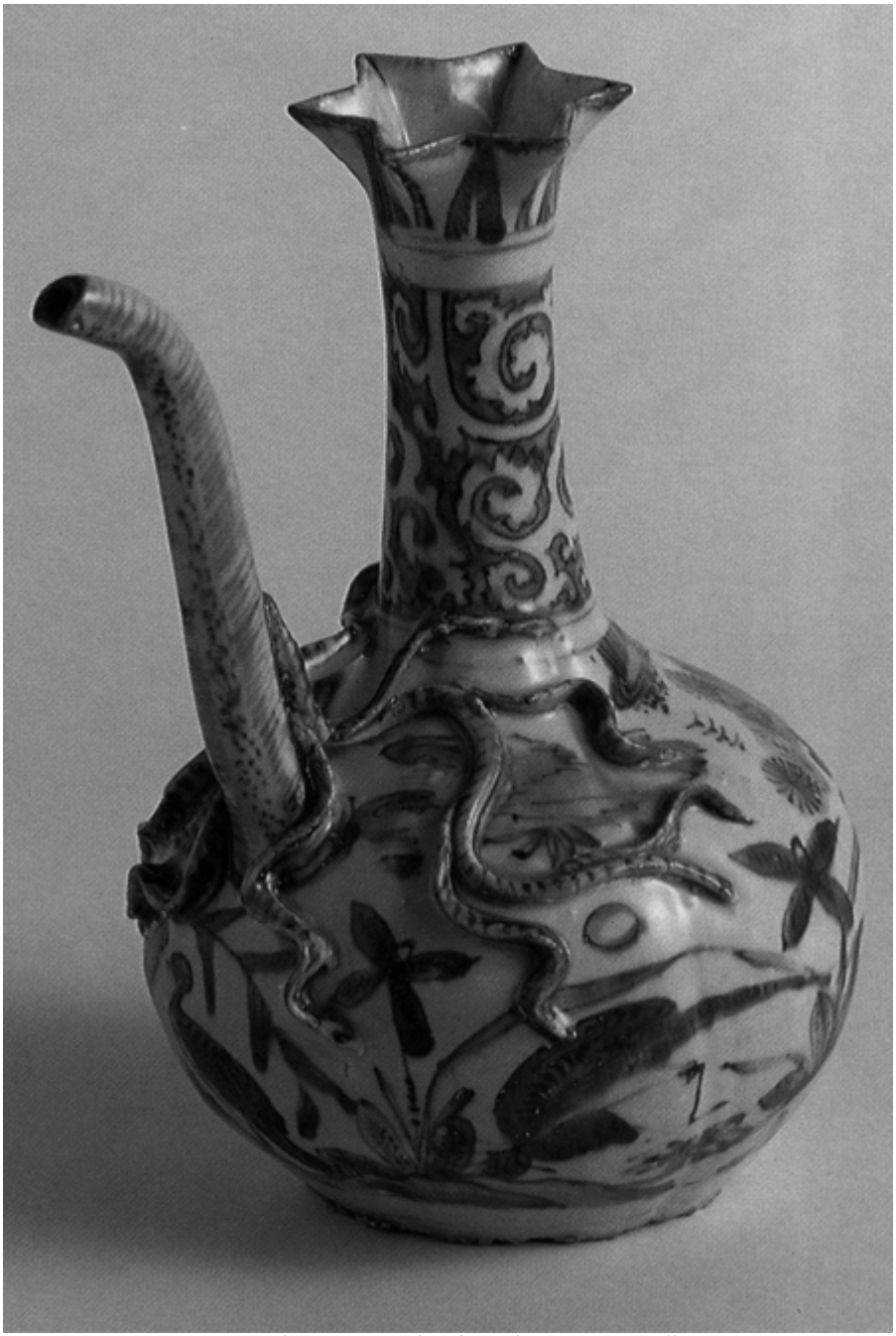


Interior of a Spanish warship galleon.


DEMOSTRATIVO
VOSSADO
AL FAMOSO

The eighteenth century ship's register for the *Nuestra Senora de la Santisima Trinidad*.

Chinese export plate with symbols of longevity.

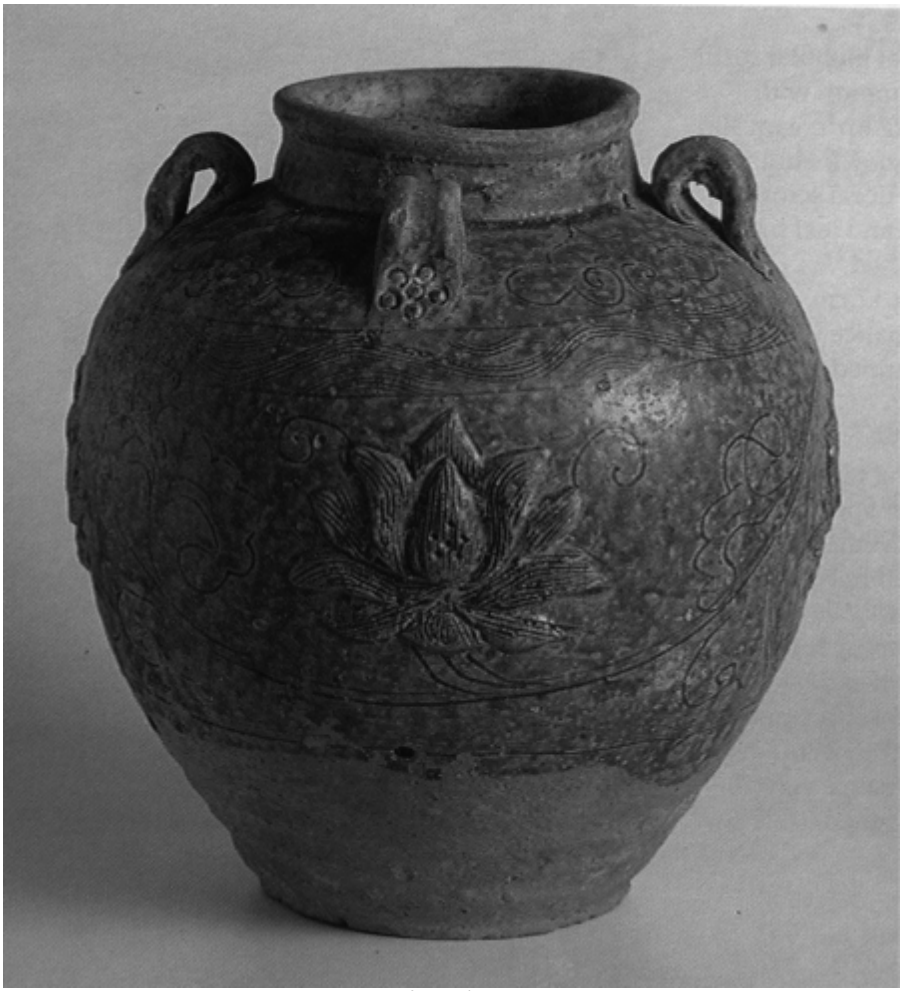


Seventeenth century pitcher from the *San Diego* galleon.

Astrolabe from the *San Diego* galleon.

Coins, rings and book clasp from the *San Diego* galleon.

Sword hangers from the *San Diego* galleon.



Water jar from the *San Diego*.

Chapter 9

The Galleon's Cargo

Practically everyone in Manila was involved in one way or the other with the galleon trade. The Spanish colonial government owned and controlled the galleons on behalf of the Royal Crown, and it was in charge of managing the construction of the vessels, as well as providing them with officers, crews and provisions. They also transported to Manila, passengers from Mexico including government functionaries, military personnel, clergy and merchants to maintain the needs of the Spanish colony. In addition, the galleon, which arrived from Acapulco, brought to Manila the subsidy of silver pesos which was used to pay for the colonial government's yearly expenses.

The Chinese population of Manila basically controlled the economy of the capital and provided the majority of goods which were shipped on the galleons. The Filipinos, on the other hand, were involved in hauling timber from the forests to the shipyards for use in the construction of the vessels. Both the Chinese and the Filipinos worked in the shipyards as skilled carpenters, blacksmiths and as seamen on the galleons. Furthermore, they provided the Spaniards with the sails, ropes, cables, and provisions required for the journey as these supplies were sourced in Manila and from the provinces. Consequently, the entire process of preparing the vessel, for its voyage across the Pacific, became a joint effort between the three main groups of individuals living in the country who all had a vested interest in the galleon's success.

Each group was involved in the lucrative galleon trade whose primary purpose was to transport merchandise and commodities for sale in the port city of Acapulco. Once the galleon had arrived in Acapulco, an enormous annual trade fair was held with merchants converging there from the numerous towns and villages of the Spanish American colonies. At the fair, they purchased the numerous Oriental goods brought to the port by the galleon. These goods were then re-transported to markets and customers throughout New Spain, as well as to the islands of the Caribbean, South America and to Spain.

But not everyone living in Manila had the right to ship goods on the galleon. This honor was reserved only for Spaniards. According to the government regulations covering the period from the start of the galleon trade in 1565 to its end in 1815, a galleon's cargo space could only be obtained by those Spaniards who were residing in the country, and registered in the ledgers of Manila's city hall. No foreigners were allowed to participate in the galleon trade and this included the

Chinese, Filipinos and the natives of Mexico.

Even though the majority of the goods shipped on the galleon came from Asian countries and the primary investors in the trade were the Chinese merchants living in Manila and in China, they could not obtain cargo space on the ship. They had no choice but to turn to the services of a Spaniard who acted as middle-man for them and arranged to have the Chinese merchants' cargo loaded onto the galleon. Acting as the consignee of the merchandise, all transactions concerning the cargo in Manila and in Acapulco were conducted under the Spaniards' name. For this service, the Spaniard received a commission from the Chinese merchant.

Initially, the governor was responsible for the allocation of space on the galleon. After 1604, a Council of Freight was established to handle the job of deciding who was eligible to receive a shipping permit. The permit allowed the Spaniard to ship cargo on the vessel. The Council of Freight consisted of as many as seven or eight members depending upon who was available at the time when the allotments were distributed amongst the Spanish community. The council was composed of the governor, the attorney general and a senior judge of the Royal Audiencia. Acting as inspectors were the mayor, an alderman and eight Spanish residents of the city, one of whom represented the Council of Merchants. When the council was in session only the members were allowed to vote in the allocation process, while non-members were only permitted to voice their opinions.

The space allocation system was meant to operate free of corruption, but this was not often the case. Any prominent or prosperous Spaniard could receive cargo space based upon his standing in the community, and how much he was willing to pay for space on the ship. In general, the cargo space was allotted to Spaniards of all walks of life in Manila, including government functionaries, merchants, clergy, soldiers and even widows.

There were nine wealthy charitable organizations established in Manila, which were managed by the various religious orders operating in the city. They too were involved in the galleon trade. Known as the "Obras Pias," (pious works), they included organizations such as the Confraternity of Mercy and the Third Order of St. Francis. The organizations were controlled by church officials, and they distributed charitable funds to needy individuals, but they also paid the salaries of officials in the small towns and villages, as well as church expenses. Contributions to the Obras Pias were made yearly by the members of the Spanish community. Even though they were church related organizations, they became indirectly involved in the galleon trade by providing Spaniards with loans and insurance policies in case the

galleon was lost at sea or was shipwrecked. They also provided funds to Spaniards which were used to finance their commercial activities in Manila. Government regulations stating that the members of the clergy were not allowed to participate in the galleon trade were ignored. Members of the church hierarchy, at all levels, became involved in one way or the other in the galleon trade.

In 1800, the Spanish historian, Joaquin Martinez de Zuniga described the activities of the Obras Pias saying that, "The rich merchants purchase these goods beforehand with ready cash, and before sailing time, insure their goods with the Obras Pias against loss or wreckage of the vessel. The poor borrow from the Obras Pias the money with which to purchase the goods for the Acapulco trade which usually comes out more expensive for them because at sailing time (which is when they receive the loan) the cost of all the goods rises." [108]

In addition to the many individuals in government, the church or on a private basis who were allocated cargo space in the galleon, the captain of the ship was legally allowed to ship merchandise on the vessel which was later sold in Acapulco. It was the governor's prerogative to select whomever he wanted for the prestigious position of captain. The candidate, who qualified for the appointment, usually provided the governor with a gift of cash in return. But as the selection of the captain was left to the governor's discretion, he could easily appoint a family member to the post or even a government functionary, he was particularly fond of to command the vessel. The question of whether or not the individual was qualified for the position was not a major concern.

The captain was not selected because of his maritime experiences or expertise, but based solely on the governor's whims at the time. The captain was paid a salary of 50,000 to 100,000 pesos to command the vessel from Manila to Acapulco. He also received a fee from each passenger journeying to Acapulco of 1,000 pesos, as well as 500 pesos from each passenger on the return voyage. On top of this, he received a four percent commission from merchants who shipped extra cargo on the vessel after it was fully loaded. As a result of these added perks, it was obvious that the position of captain was a coveted appointment, as it provided the individual with the opportunity of sharing in the vast wealth garnered by the galleon trade.

Spanish Regulations Concerning the Manila Galleon

From 1565 until 1593, the galleon trade run was unregulated and yet extremely successful for those individuals who invested in this enterprise. There were at times as many as four galleons sailing together from Manila to Acapulco in any given year. The cargoes they carried depended upon the size of the vessels in which they were

contained. They carried a multitude of Oriental goods, which ranged from luxury items to everyday household necessities, without having any restrictions imposed upon the quantities of cargo loaded onto the individual vessels. After 1593, the Spanish government began regulating the commerce between Manila and Acapulco with further changes taking place in 1604 and thereafter.

The regulations of the late sixteenth to the early seventeenth century were passed in response to complaints made to the government by merchants in Spain. They voiced their objections to the galleon trade as it hampered the sale of their own products in the Americas. The galleon trade led to the development of a highly bureaucratic system in Spain and in Mexico City's viceroyalty, just to manage the activities of the transpacific galleons. One of the main problems the authorities had to deal with was the influx of a multitude of Oriental goods into the markets of Mexico. The products had become exceedingly popular and sought after by customers located throughout the Spanish settlements of the Americas. Chinese silks were particularly in high demand and purchased just as quickly as they were sold at the Acapulco trade fair. Customers preferred buying them rather than purchasing the silk fabrics exported to the colonies by Spanish merchants in Cadiz and Seville. This led to a number of difficulties between the Spanish government in Spain and the silk merchants of the peninsula who were dismayed by their dwindling profits.

New regulations were approved to restrict the transpacific commerce. The regulations were passed in order to placate the Spanish silk merchants who protested that the galleon trade was undercutting their own silk exports. The merchants felt that they could not compete against the Chinese merchants who shipped silks to Acapulco, which were apparently sold at lower prices and were of higher quality than their own products. Chinese silks continued to be the primary export item shipped on the galleons despite the regulations enacted by Spain and Mexico.

In 1593, Philip II issued a Royal Order indicating that the number of galleons involved in the transpacific commerce was thereafter limited to just two vessels each year. A third vessel was retained in reserve at the port of Acapulco. As the cargo space on the ship depended upon the carrying capacity of the vessel, the Spanish government also made an effort to regulate the galleon's tonnage. The Royal Order stated that only vessels of 300 tons were permitted to participate in the transpacific trade even though vessels of 700 tons were already in use by 1589. In any case, the regulations were ignored in Manila as larger vessels of more than 1,000 tons were constructed during the seventeenth century. The tonnage restriction was amended to 560 tons

in 1720, but by then vessels of 2,000 tons were already in operation in the transpacific trade route. However, the restriction of allowing only one galleon to travel from Manila to Acapulco and vice versa each year remained the norm until the galleon trade run ended in 1815.

The Ship's Register (Plano Demonstrativo)

According to the Spanish government, every vessel embarking from ports in Spain, the Americas or from the Philippines, were all required to have a ship's register (plano demonstrativo). The notion of providing each vessel with this type of documentation was not a new idea. In fact, it was an ancient seafaring practice, which was adopted by the House of Trade in Seville for use on vessels sailing from Spain to the Americas. A ship's register or manifest had long been in use in Europe from as far back as the Medieval days. The document served as a tracking device to follow the activities of any given vessel. It provided information on the vessel's port of departure and its destination. Additionally, the document contained data on the number of crew members and passengers on the vessel, the type of weapons it carried and the cargo it contained.

However, one of its main objectives was to monitor the criminal activities of smugglers who carried unregistered goods on the vessels. The House of Trade was concerned by the number of unscrupulous individuals who were continuously involved in the trafficking of illegal goods. As such, they avoided paying customs duties and taxes on the goods which were owed to the Royal Treasury. By enforcing the use of a ship's register it allowed the government to improve the supervision of the sea vessels, as well as providing them with easier access to customs duties and other fees involved in the commercial trade.

The earliest ship registers used by the government to conduct its own private trade were produced by clerks aboard the vessels. Upon completion, they were signed by the ship's captain and a copy of the document was submitted to the comptroller (*contador*) of the House of Trade. The comptroller kept a file of all of the ship's registers submitted to his office, which required his approval. As the House of Trade's jurisdiction over commerce with the Americas grew in importance, it began acquiring a greater supervisory role in its management. The House of Trade stipulated that all trade with the Americas had to be logged into a ship's register and submitted to the House of Trade. This was the case for all merchant and royal crown vessels. Once the register was completed and submitted to the House of Trade, no further cargo could be taken aboard the vessel unless it received permission from the House of Trade.

The captain of the vessel or the ship's master had to post a bond ensuring that the cargo listed in the ship's register was delivered to its

intended destination, and that no extra or unregistered cargo had been taken on board. Once the ship arrived at its destination, the customs officials issued a receipt after inspecting the ship and its register for accuracy. The receipt was then submitted to the House of Trade when the vessel returned to Spain. No officials, regardless of rank in the American ports, were allowed to open the ship's register except for the customs officials.

In the Philippines, the galleons were also required to have ship registers. Following the system employed in Spain and in the Americas, the Manila galleons were obligated to fulfill all of the same requirements indicated by the House of Trade. Again, the name of the vessel, the cargo it contained, the consignee involved, and the names of the individuals on board the galleon departing from Manila or from Acapulco, all had to be recorded in the ship's register.

When the galleon arrived in Acapulco, all crew members and passengers had to remain on the vessel until the customs officials completed their inspection of the ship and its cargo. Once this procedure had been completed, the passengers were allowed to disembark, and the cargo was transferred to royal warehouses. At the warehouses, the customs officials would then levy the customs duties required on the cargo. The ship's master paid the customs duties and taxes to the customs officials on behalf of the buyers in Mexico to whom the cargo was consigned.

The procedure was strictly maintained, but passengers and crew still managed to bring in goods for sale in Mexico which had not been declared in the ship's register. They hid merchandise in their luggage or carried them openly such as jewelry which they claimed as personal possessions. It was not unusual for Spanish ladies to arrive at the port covered in gold chains and jewels which were ultimately destined for the marketplace.

As another example of how smuggled goods were transported on Spanish vessels, one need only look at the experiences of Dr. Antonio de Morga who was once a judge in Manila's Royal Audiencia. When he left the Philippines in the early years of the seventeenth century, he was transferred to a government position in Mexico City. He was later assigned to Ecuador where he served as governor. At the time, there was some controversy regarding the fact that he had taken a large quantity of bales of Chinese silks to Ecuador. On the ship, he and his family were travelling aboard to his new assignment the bales were listed under his name. When questioned about the shipment, he stated that the bales contained books which were part of his personal library. In fact, he was actually taking the silks to his son in Ecuador who was involved in selling the fabrics in Lima, Peru. Ultimately, he was not prosecuted for his failure to register the bales of silk as "cargo." This

incident serves as a reminder that Spanish officials, in the highest levels of government, were involved in the transportation of undocumented goods.

Customs Duties on Ship's Cargoes

The use of ship registers provided the House of Trade with a system by which they could control the many vessels under their jurisdiction, as well as tracking the revenues collected in customs duties for the government. The inspection of the vessels and the acquiring of customs fees became one of its primary activities as it provided the government with the funds to maintain the warships in the convoys to the Americas, as well as paying other expenses incurred in the management of the fleets.

In almost every major Spanish port in the Americas, as well as in Manila, a customs house was established. Known as the "Aduana," its primary activity was the inspection of the vessels and the collection of the import duties on behalf of the Spanish Crown. The word "Aduana" originated from the Arabic word "Adayuan," which simply meant recording information. It was obviously derived from Moorish influence in Southern Spain where many Arabic terms became part of the lexicon used in the Spanish language.

There were two types of customs duties imposed on imports and these were the "averia" and the "almojarifazgo," which is another Arabic word meaning tariff. Both were collected by customs officials on goods shipped to Spain from the Americas and vice versa. The almojarifazgo was a customs tax on the value of imported goods brought into the country when sold at marketplace prices. It was initially created in 1543 by a royal order of Charles V, which stated that trade with the Americas and Spain was to be taxed at a rate of five percent on the value of the goods.

By the early sixteenth century, it had become obvious to the Spanish government, that it was necessary to provide warship galleons for the protection of the merchant convoys. By this time, they had become easy prey for pirates who were operating in Spanish waters and endeavoring to seize their cargoes. English, French and Irish pirates were brazenly sailing in search of treasure in the Caribbean - around Cuba, Hispaniola and the ports and towns of the Spanish colonies in the Americas. They were also operating in European waters, as well as off the Canary Islands and the Azores.

The first disastrous encounter with pirates occurred in 1521 when two Spanish vessels filled with treasure were attacked and captured by French corsairs. As Spanish merchants complained to the government and provided details of the incident, the government's response was to send a small fleet of ships commanded by Captain Pedro Manrique to cruise the waters near Cape St. Vincent (Portugal). In order to finance

this defensive fleet, an averia tax was collected for this purpose. The tax was imposed on all merchant vessels and the precious metals they carried to the peninsula from the Americas and the Canaries, whether they were owned by the Crown or in private use. The tax was also imposed on any coastal towns that could be threatened by pirate attacks and required military protection supplied by the government. The first convoy of merchant ships and warship galleons to leave Spain in 1522 became known from then on as the “Armada de la Carrera de Indias” or the “Warships of the Indies Route.”

As pirates continued to pose a threat to the Armada de la Carrera de Indias, it became a permanent fixture on the trade run between Spain and the Americas. In order to provide a regular armada to protect the merchant vessels, it was necessary to establish a permanent tax to maintain the warship fleets which in addition to sailing with the merchant vessels to the Americas, could also patrol waters off of Spain, the Canary Islands and the Azores. This new tax was imposed on trade not only with the Americas, but also in the Canaries, Azores, Madeira and the Barbary Coast (Morocco, Algeria, Tunisia and Libya). The job of organizing the collection of the taxes was managed by the comptroller of the House of Trade, Juan Lopez de Recalde and merchants in Seville. The taxes were used in the expense of selecting the officers of the warships, the leasing of vessels, salaries, weaponry and provisioning the ships. If any of the warships captured prizes i.e., seized an enemy vessel and its cargo, these were to be turned over to the House of Trade for use in the maintenance of the warships.

The armada, which usually consisted of at least four warships, was initially discontinued for a time in 1525, but was then re-established in 1528 when a new contract was signed by the House of Trade. This event occurred with the onset of renewed piratical activities in Spanish territories. A set of regulations governing the collection of the averia was organized in March 1573. At that time, the House of Trade issued forty-three ordinances covering the details of the tax, which again, was used to maintain the warships sailing in the merchant convoys to the Americas. The managing of the averia was conducted by both official judges and representatives of the merchants. Collecting the averia itself was managed by a judge, a deputy auditor and a receptor or collector. A notary was appointed to each fleet, and he was in charge of ensuring the enforcement and collection of the averia. A veedor (overseer) was involved in ensuring that the averia was correctly collected and spent wisely.

Before a vessel was allowed to embark from the peninsula to the Caribbean, the House of Trade had to ensure that a number of steps had been carried out. By the time the registers of the merchant vessels had been inspected, and the averia assessed, the House of Trade was

able to provide an estimated figure of the expense involved for the preparation of its accompanying warships. When the fleet returned to Spain, from the colonies, further estimates had to be made which took into account the costs for the maintenance of the warship galleons while they had been in the Americas, as well as assessing the averia tax on the precious metals and other commodities they imported into Spain.

The averia tax was placed on all cargo going to the Americas or returning to Spain. One exception to the rule was the profits a captain earned from the sale of his own freight. The freight remained untaxed. All merchants and ship owners had to pay the averia for the goods shipped aboard the vessels. The only other exception to this rule was if ship owner or merchant worked on the vessel, as a pilot or ship's master, in which case his freight charges were not taxed. By the seventeenth century the rules and regulations covering the averia were eased up a bit for officers of vessels such as captain generals, admirals and the captains of warships who were allowed to carry freight tax free.

In the Philippines, the galleon trade also had to comply with the payment of customs duties. When a Manila galleon arrived in Acapulco, the ship was inspected and the appropriate taxes were imposed on the cargo by the officials located there. But unlike in Spain, where the taxes were used for the maintenance of the warships, the Royal Treasury in Mexico City used the collected funds to finance the subsidy of 250,000 silver pesos which was sent to Manila each year. This method of financing the subsidy for the Philippines, from the collected customs duties imposed on the galleon's cargo, meant that in essence the Spanish government did not have to dole out funds from the Royal Treasury to maintain the Philippines. The investors in the trade were indirectly paying for the subsidy themselves.

From 1604 to 1637, the colonial government in Manila attempted to impose an outbound customs tax on the individual ships in the Philippines. The tax was deemed necessary in order to provide funds for the maintenance of vessels in the ports. However, it was almost impossible to collect. Both the owners of the vessels and the merchants, who were shipping goods on the vessels, claimed that they were already paying too many expensive customs duties in Mexico, which amounted to fourteen percent plus duties of nine percent on imported goods. They also had to pay an additional three percent customs duty on goods brought to Manila by Chinese trade vessels.

The Process of Registering a Ship

According to Spanish government ordinances of 1534, all vessels embarking from Spain, which had completed the registry formalities, received a license from the House of Trade. In order to issue the

license the House of Trade conducted its own inspection of the vessel taking into consideration its age, tonnage and its seaworthiness to complete the journey to its intended destination. The inspection was conducted by inspectors known as “visitadors,” who were familiar with the construction of sea vessels, the careening of the ships and their repairs, as well as knowing how cargo was to be prepared and loaded onto the vessels. They conducted three inspections of each vessel. The first inspection occurred before the cargo was loaded onto the ship, another after the cargo was in place and a third prior to the embarkation of the vessel from the port. The inspectors reported their findings to the House of Trade indicating whether or not the vessel in question was in need of repairs or if it was deemed unseaworthy. They also informed the ship’s master of the supplies and equipment that the vessel should be supplied with such as additional anchors and cables.

The process followed a number of steps. The captain of the ship or the merchant, who was shipping cargo on the vessel, had to provide the comptroller of the House of Trade with a signed document indicating the name of the vessel carrying the cargo; the type of cargo and quantities to be shipped and the owner of the cargo. After receipt of this document the comptroller provided an official permission to allow the cargo to be loaded onto the vessel. After 1570, a sworn statement attesting to the contents of the document was required from the captain or the merchant. The document indicated that all was correct and in order. All of these documents formed a ship’s register with copies of the documents kept at the House of Trade, and another set given to the ship’s captain in a packet for presentation to the customs officials at the port of arrival in the Americas.

Later, the process was changed with the establishment of a simpler, but long document, on which all of the above mentioned details were listed. Contained in the new document was the ship’s destination, the name of the fleet in which it was sailing, and any identifying marks by said owners. Each person who was shipping his own personal goods on the vessel used a mark of identification which consisted in most cases of their initials written in dark ink on the crates, boxes or packages (this was a procedure also followed by merchants and private passengers on the Manila galleons). Attached to the document were the receipts for the taxes paid on the freight and its value, the type, quantities and quality of the freight, the names of the consignees, as well as the receipts from the customs officials at the port of destination after they had received their customs duties. When all the papers were satisfactorily prepared, they were presented to the comptroller of the House of Trade where they were included in the file for that particular ship.

An indication of one of the simpler registers used by the Manila

galleons can be seen in the Mexico City, where the ship's register for the Manila galleon the *Nuestra Senora de la Santisima Trinidad* has been preserved at the Mexican National Archives. The ship sailed from Cavite to Acapulco on April 29, 1752. The three page document was filled in by Don Antonio de Cosio who was probably the ship's master. On the highly decorative document, there were spaces which had to be filled in by the ship's master. These included information on the officers (oficiales) of the ship, the passengers (pasajeros), fardos (the number of bundles or bales of cargo), type of cargo the ship carried, troops (tropas), provisions (viveres), deaths (muertos), and the days it took the vessel to reach from one point to the other such as from the San Bernardino Strait to the area near the Marianas. It also indicated the time (tiempo), when certain events took place on the ship and other information such as how many people became sick during the voyage and the number of babies that were born on the ship.

The *Nuestra Senora de la Santisima Trinidad* was in service on the Manila-Acapulco trade run from 1752 to 1763. She was the first galleon to successfully sail the Pacific route to Acapulco in 1755, after the British Naval Commander Anson captured the *Nuestra Senora de Covadonga* in the Philippines in 1743. Another vessel the *Nuestra Senora de Pilar y Zaragoza* attempted to sail to Acapulco in 1750, but she sank not far from Manila Bay. However, while the *Nuestra Senora de la Santisima Trinidad*, a massive ship of 2,000 tons, enjoyed many years of service on the trade route, it was eventually captured by the British when they invaded the Philippines in 1762.

When customs officials in Acapulco inspected a galleon's cargo, they were presented with documents consisting of sworn statements made by the individuals who shipped cargo on the vessel. This document was known as the "Factura Jurada" (sworn statement), and served as a customs declaration of the goods they were shipping to Acapulco. The statement was generally accepted without question by the customs officials in Acapulco, as they were generally loath to open each and every package carried by the galleons. The declaration was often referred to as a gentleman's agreement amongst Spaniards and was therefore considered an insult to one's honor to question its contents. When Pedro de Quiroga, acting on behalf of the Royal Crown arrived in Acapulco in 1636, as an inspector, he began opening each and every package carried on the galleons. The Spanish officials located there and the merchants and shippers of goods were horrified that he ignored the sworn statements provided to the customs officials. Quiroga's actions were seen as an affront to all sensibilities. The system of producing sworn statements continued into the eighteenth century even though there were some Spaniards, who felt that opening all or some of the bales of cargo had been warranted given

the fact that undocumented goods were continuously entering Mexico. However, from time to time, when the customs officials found an unduly suspicious bale or bundle, it was opened during the inspection process.

The cargo was transferred from the galleon to royal warehouses on shore. It remained there until the start of the Acapulco trade fair. Undocumented goods found in the galleon were confiscated by the customs officials and later sold with the proceeds turned over to the Royal Treasury. After the ship had been emptied of its cargo, another inspection was conducted by the customs officials to see if any other undocumented goods were hidden on the vessel. After this inspection was completed, the galleon was turned over to the local shipyard for careening and repairs to prepare her for the return journey to Manila.

The Variety of Cargo Carried by the Galleons

There was a great difference in the way the Spaniards handled their trade relationships with their settlements in the Americas and their Asian colony of the Philippines. In the Americas, the Spanish government had initially established a trade monopoly in their colonies where everything and anything they needed had to be purchased from merchants in the peninsula. All household furnishings, medicines, textiles, clothing, foods, tools, weaponry, ammunition and so on, had to be purchased directly from Spain. The monopoly was a source of great profits for the merchants in Spain who were able to maintain a strangle-hold on the colonists. In return, the colonists exported the commodities and precious metals of silver and gold to the mother country.

By depending on Spain for all its requirements, there was no incentive or need to develop the manufacturing of local products. In time, it had become obvious that Spain could not produce goods fast enough for the demands of growing markets in the Americas, and for this reason the Oriental goods brought to Mexico every year from the Philippines became popular and sought after. Not only were these goods plentiful, but they were offered for sale at much lower prices than comparable imports from Spain.

The massive number of goods brought to Manila from China, has been insightfully described by Dr. Antonio de Morga. Chinese junks arrived in Manila Bay every year and were filled with a variety of goods to be sold in markets in Manila, as well as for the galleon trade where they were sold for huge profits in Mexico. The goods ranged from fine fabrics and textiles, to a variety of household items, ceramics, pottery, furnishings, foodstuff, jewelry and decorative items for the home including religious objects for churches such as screens and statuary. Dr. Morga also wrote of the processes the sea vessels followed once they had arrived in Manila Bay and how the cargo was

unloaded. In every step of the process, it was clearly similar to the formalities established by the House of Trade in Seville.

Dr. Morga wrote that every year from March onwards, as many as thirty to forty trade junks arrived from China. They came to Manila from various ports in China, but primarily from Canton. The voyage to Manila usually took about fifteen days to complete. When they arrived in Manila Bay, they were met by a unit of Spanish soldiers who were posted to guard duty at Mariveles in Bataan at the entrance to the bay. From there they could observe any arriving vessels. When a vessel sailed into Manila Bay, three of the Spanish soldiers went aboard the ship and escorted the vessel to the port of Cavite. By this time, officials in Manila would have been alerted of the vessel's arrival through the use of a signal system using flares, which had been fired at the bay's entrance.

Once the Chinese vessels arrived at Cavite, the soldiers provided the government officials with the names of the ships, where they had come from and how many people were aboard the vessels, as well as the type of cargo they were carrying. A customs inspector was sent out from the city to the vessels to review their ship's registers and inspect the cargo they carried, as well as estimating its value and determining how much it could be sold for in Manila. The main purpose of the Manila inspection was to impose a customs duty of three percent on the cargo for the Royal Crown. No one on the vessels was allowed to go ashore and cargo could not be unloaded until the customs official had completed his inspection.

After the inspection was completed and the value of the goods established, the cargo was loaded onto smaller boats and transferred to warehouses in Manila. While in the warehouse, the cargo was again inspected by government officials to assess the value of the goods which were destined for loading onto the galleon. As a portion of the merchandise was to be sold in the Parian, it was transferred to the marketplace and the Chinese merchants who were awaiting its arrival. Spaniards and Chinese from Manila were not permitted to actually board the vessels and conduct trade negotiations with the captains of the trade junks.

The merchants in Manila paid for the Oriental goods in silver dollars as it was the only mode of payment accepted by the Chinese. By the month of May, all transactions had been completed and the Spaniards and Chinese in Manila could begin making preparations to transfer the cargo to the galleon in Cavite. The galleon was normally scheduled to sail by the end of June to Acapulco. After completing the sale of their goods to merchants in Manila, the Chinese vessels quickly returned to China before the onset of the rainy season which began at the end of May or in early June. As Dr. Antonio de Morga stated in his

book, the merchandise brought to Manila by the Chinese vessels in the late sixteenth century included the following: “ raw silk in bundles of fine silk, medium quality silk, fine loose white silk of various colors in small skeins, velvet, plain and elaborated with various designs, colors and qualities; other fabrics with gold and gilt edges; fabrics of gold and silver brocades on silk of various colors and designs; skeins of gold and silver on woven threads on cotton and silk, but the gold and silver are tinsel-like, also damask, satin, taffeta, glossy silk stuff and other cloths and fabrics of all colors, some finer and better than others. ” [109]

They also brought, “linen handkerchiefs, white cotton blankets of different kinds for all purposes; musk, benzoin (aromatic resin for medicinal use), ivory, beds, pavilions, bedcovers, hangings, embroidered on velvet; damask and Gorgoran (a type of silk) fabrics in various shades, table covers, pillows, rugs, harness ornaments, glass beads, imperfect pearls, rubies and sapphires, hollow stone crystal beads, copper kettles and glasses, nails of different kinds, iron kettles and sheets, tin, lead, saltpeter and gunpowder; wheat flour, orange preserves, peaches, viper roots, pears, nutmeg, ginger and other Chinese fruits, ham and bacon and dried beef, live chickens, also for breeding purposes, very good capons, many green fruits, citrus fruits of all kinds, good chestnuts, almonds, pears, green and ripe chicueyes which are delicacies; sewing thread of all kinds, needles, spectacles, gilt and jasper decorated boxes, desks, tables, chairs and benches of various shapes and workmanship, tame buffaloes, swan sized geese, horses, some mules and donkeys, even caged birds that talk and sing and which can perform a thousand tricks, toys and trinkets highly esteemed by the Spaniards by the thousand at very cheap prices, aside from considerable bric-a-brac of all kinds and cangan (kanga textile) and fine fabrics, black and blue blankets and glass beads of all species, red agate, stringed beads and varied beads of stones of various colors, and so forth and other countless curiosities which if listed would make an endless job and would require considerable amount of paper.” [110]

As the galleon also carried products from the Philippines, it was the entrepreneurial Chinese merchants of Manila who were also involved in purchasing goods from Filipinos in the small towns and villages scattered across the country for the vessel. Father Horacio de la Costa quoted an interesting description by Archbishop Camacho on how the Chinese began operating a vaster trade network in the provinces, which became supplemental to the goods brought to the colony from China. The Chinese merchants were eager to purchase the products for sale in Manila, as well as for the provisioning of the galleons.

“Every province of these islands produces something special to it. Some abound in rice, beeswax and civet - others in ambergris, gold

and pelts - still others in wine and oil, textiles and embroideries and so on. These Chinese know this very well and they know exactly how to take advantage of the fact. To establish full control and thus drive the greatest profit at the least expense, they secure the necessary license from the government and scatter, some going to this province and some to that. Upon reaching their destination they persuade the alcalde mayor to let them set up a little Parian (Chinese community) for themselves by giving them a lump sum of 100 or 200 pesos or even more, besides offerings at regular intervals. They do the same with the parish priests whom they know to be opposed to their coming. Having thus obtained leave, they select an out of the way part of town where they will be least subject to official observation and there having built their houses and little shops, they begin to ply their trade. They sell liquor, tobacco, textiles. Little by little the natives get to know the place, are attracted to it, and because of the cheap truck they see there can hardly tear themselves away. The Chinese sell at six reales the cloth that can be had in Manila for three and when the natives find themselves in need and hungry, the Chinese give them rice on credit. Of course, the interest on the loan is such that the natives discovers at harvest time that he owes his entire crop to the Chinese for the rice and the jiggers of liquor and other tidbits which he has consumed in the course of the year. Thus, they take from him, without his feeling it, all that he owns and in the same manner they absorb like sponges all that the provinces produce in order to sell them to the Spaniards in Manila. ”[111]

Merchandise was also brought to Manila from India, Sri Lanka, Japan and Southeast Asian countries. According to Morga, Japanese and Portuguese vessels arrived in Manila in March from Nagasaki, with goods and commodities for sale in the city or for transport on the galleon to Acapulco. Some of the many items they brought to the city included cargos of woven silks in various colors, clothing and kimonos, oil painted and gilt lacquered screens, small wooden lacquered boxes, wooden cases, chests with inlaid mother-of-pearl, writing cases, cutlery, weapons, spears, katana swords, armor, sabers, trinkets, amber, cages of larks, food items such as flour, dried beef, fresh fruits such as pears, and barrels and casks of salted tuna. Morga mentioned that many of the Japanese goods sold well in Mexico. Unlike the Chinese, who only accepted silver dollars in payment for the goods they brought to Manila, the Japanese were not so keen to receive this sort of payment as they had silver mines in their own country. Instead, they purchased goods in Manila for Japanese markets such as raw silks from China, gold, deerskins, civet cats, large jars, dyeing woods (Brazil wood), honey, wax, palm and Spanish wines, tea, glass, woolen clothing and Spanish trinkets. They returned

to Japan in June or July with the onset of the Southwest monsoon winds, which was then referred to as the “vendavals” or gales by the Spaniards.

Products from India and Sri Lanka included: fine cotton fabrics; Bengalese muslins, and “cambayas” from Gujarat, northwestern India, which consisted of blue dyed cotton. It was used in Mexico, where it was known as “China Poblana” (Chinese Pueblan). The traditional costumes used by Mexican women were made of this fabric. Other fabrics included “paliacates,” which were printed cottons from Palakkad, southwestern India. They were popular in Mexico – then, as they are today. The word “paliacates” may have originated from the Mexican Nahuatl language. The Indian shawls that were brought to Manila and then to Mexico, became sought after items in Mexico and continue in popularity to the present day. They are scarves and shawls which are known as “rebozos.” There were also products which were not produced in India, but brought there by traders who traveled to Middle Eastern countries. These included Persian rugs and carpets. Items from Sri Lanka included sapphires, rubies and topazes and other precious gems.

Portuguese vessels also arrived in Manila from the Moluccas (Spice Islands), India and Malacca. Their cargoes consisted of aromatic and sought after spices such as cloves, cinnamon, nutmeg and pepper, cotton cloths and other fabrics including muslins, linen, lingerie, embroidered fabrics, ambergris, ivory, bedcovers, pavilions, mattresses, ornaments, jewels such as topazes, rubies and other gemstones set in jewelry or loose, curiosities from India, wines, raisins, almonds, preserves, fruits from Portugal, Persian and Turkish rugs and bedcovers, silks and fine woolen goods, beds, desks, drawing room chairs, furniture made in Macau, white and colored embroideries.

According to Morga, the Portuguese also brought Black and Asian slaves to the Philippines, who were sold in Manila and apparently were said to be in great demand there. Although Spain passed regulations to curb these activities, the commanders of the galleons were still allowing humans to be transported to Mexico where they were sold as slaves. In 1626, the Spanish government passed a law placing a tax of 500 pesos on each slave brought to Mexico and sold there. In 1700, another law completely ended the trade in slaves. The slaves sold in Mexico came from a variety of places in Asia, as well as from South Africa. Spaniards travelling on the galleons with their slaves often sold them once they arrived in Mexico.

All payments for these goods were made to the Portuguese in silver reales (pieces of eight) or in gold. They were not required to pay customs duties on their cargoes when they arrived in Manila Bay. The

sort of goods they purchased in Manila, for sale later on in the Moluccas, included Philippine rice, wines and ornaments. For the Malacca markets, they carried from the Philippines, gold and trinkets and curiosities from Spain, as well as gems such as emeralds. They sailed from Manila Bay in January.

Smaller sea vessels arrived in Manila Bay from Borneo commanded by natives of that country. They brought to Manila a variety of commodities and goods such as palm flour, sago, vases and a variety of jars (both large and small ones with black decorated glass), camphor and slaves. Filipinos were the main buyers of the goods brought to the Philippines by the Borneo vessels. In exchange for their purchases, the Filipinos bartered for these goods by providing rice, wines, cotton blankets and trinkets.

Other trade vessels arrived from Thailand and Cambodia bringing cargoes of pepper, ivory, cotton sheets, ceramics, pottery, gems such as rubies and sapphires, dyed materials, animal skins, nails, ornaments and again, more slaves. In Manila, they purchased commodities available there and returned home in April, May or June.

A smaller proportion of the galleon's cargo consisted of Philippine products. As far as the Spaniards were concerned the country produced very little that was of interest to buyers in the Americans. Moreover, they felt that in many cases similar products could be purchased in the Americas or imported from Spain. The Spaniards of Manila continued to be primarily interested in the products of China and from the other Asian countries such as silks and fine fabrics, spices, ceramics, gems etc., which could be sold for higher profits in New Spain.

The types of Filipino products shipped to Mexico included gold dust, wax, and abaca/hemp which was used in the production of ropes, cables, cordage and rigging. In great demand were the cloths or cotton "mantas" produced in Ilocos for use as sails on the galleons and other sea vessels. Gauze which was produced in Cebu was highly sought after by Mexican customers. Other products included cotton stockings, bedcovers from Lubang and Ilocos, blankets, hammocks and petticoats from Ilocos, linen sheets, tablecloths and bed canopies. Some cinnamon was also exported from the Philippines, but in smaller quantities if compared to other Asian countries.

Had the Spaniards been interested in developing the country's natural resources to provide additional exports from the Philippines, they would have probably reaped even greater profits. They were, however, not motivated by any other possible ventures except to continue the prosperous galleon trade. Le Gentil wrote of the Spaniards' lack of interest in developing the country saying,

"If the Manila colony had a proper understanding of its own

interest, it might carry on that trade perhaps to advantage for it has excellent cotton, Campeche wood, an abundance of wax and so forth. Rice would furnish a considerable trade if exported to different districts of India and especially to Bengal. It seems to me, that Manila might produce the provisions which it now imports from India and at much lower cost. The captain of the ship *San Antonio*, upon which I traveled from Manila to the coast of India, had nothing to carry on his return voyage except some dollars which belonged to the Armenians. The captain cleverly took advantage of the empty space available in his vessel and succeeded in filling it with Campeche wood, wax and cotton, being convinced that all these articles would find a ready market in China. The Manilans then make the mistake of being inactive. Their city is well placed as Batavia with respect to India and the Philippines certainly have an advantage over Java as regards the production of desirable export merchandise. The trade of Manila might therefore be as good as the trade of Batavia. Factories of cotton cloth and muslin might be established in the Philippines. The natives already make superb fabrics with the thread of the wild banana (abaca). Could they not do just as well with their cotton?" [112]

As mentioned earlier, the galleons carried gold from the Philippines, but the mines in the country had never been fully exploited by the Spaniards. According to Governor Diego Ronquillo (1583- 1584), he wrote that it was not uncommon to find that as much as 60,000 to 70,000 pesos worth of gold was shipped annually to Mexico from the Philippines. However, as the main exports from Manila continued to be silks and other Oriental goods, both gold and spices gradually became of less importance as exports. In the historical record, there is evidence that the galleons carried Philippine gold. One example of this was the *Santa Ana* galleon. When she was captured by Thomas Cavendish, off the coast of California in 1587, as she sailed to Acapulco from Manila, part of her treasure included Philippine gold. The ship also carried a vast cargo of Chinese silks and other fabrics, which were largely thrown overboard as Cavendish did not have enough space in his vessels to carry the additional cargo.

By the end of the seventeenth century, the types of Chinese cargoes carried on the galleons began to change, with a greater emphasis placed on mainly carrying a variety of fine silks, cottons, textiles and high-end luxury goods. In the Americas, customers who had the means and the wealth to pay for these top of the line products, were eagerly awaiting the arrival of the galleon in Acapulco. In addition to high quality fabrics, they were interested in buying exquisite pieces of furniture, fine porcelains, hand crafted carpets, magnificent lacquered screens, as well as the many superbly turned out statuary and artworks used by the Catholic churches in the Americas.

Loading and Stowage of the Cargo

When a galleon was being prepared and loaded for its next voyage, the port of Cavite became a hub of intense activity. All the individuals who took part in the construction, repair and maintenance of the vessel were involved in making any necessary alterations to the ship. Spaniards, Filipinos and Chinese officers, managers, skilled workers, tradesmen, craftsmen, laborers, all assembled at the port to prepare the vessel for the journey. Meanwhile, the merchants who were shipping goods to Acapulco supervised the unloading of their cargo from smaller boats onto the galleon. The vessels included Chinese junks, sampans, paraos (a large Philippine vessel), and bancas (small boats). The vessels were continuously arriving at the port from warehouses in Manila and from the Parian.

There were two members of the ship's crew who were primarily involved in the loading process of the galleon: a registrar and an overseer. They were in charge of what was to be loaded onto the vessel and where in the ship it was to be stowed. Also of concern was the need to maintain the ship's safety at sea by ensuring that the cargo did not shift during a voyage. If this occurred, it could have led to a dangerous situation for the galleon, as it could easily list to port or starboard and sink during a storm or rough seas. The registrar and the overseer were selected based on a set of criteria including the fact that they both had to be beyond reproach and trusted employees. It was also expected that they could not be bribed or tempted to load extra cargo on the vessel than the permitted quantities. As they were considered very important members of the crew, they each received a salary of 2,000 pesos per voyage.

There were two other important officials who were hired by the Spanish government in Manila and were directly involved with the galleons. The first individual was the "proveedor" or purveyor, and the second was the "contador" or accountant/comptroller. The purveyor was employed by the government as part of the port administration in Cavite. It was his responsibility to purchase equipment, supplies, and provisions for the galleon's voyage to Acapulco. He also provided the galleon with the weaponry it carried in order to defend itself against enemy vessels. The galleon also carried additional supplies and equipment which might be required by the vessel on its return journey to Manila. Provisioning of the vessel was completed in both Manila and Acapulco to provide fresh foods and water. The comptroller was involved in the preparation of the ship's register and other documents concerning the cargo loaded onto the galleon. It was his responsibility to make sure that the cargo was documented in the ship's register. He was also involved in checking the incoming galleon's register when it returned to Manila from

Acapulco. There were several other officials involved in the preparation of the galleon and these included a commissioner of licenses; several customs officials including an individual who was in charge of the customs guards, and a representative from the Royal Treasury in Manila.

In Spain, a license to sail was issued to all vessels which complied with the requirements specified by the House of Trade. They could sail to the Caribbean alone or as part of the Atlantic convoys. In 1582, the House of Trade, in consultation with the merchant's guild in Seville, decided the number of vessels which would be allowed to join the convoys. For a brief period of time, the process of selecting the vessels, which were permitted to travel to the Caribbean, had become so cumbersome that the Council of Indies took over this duty only to return the process back to the House of Trade in 1613. After finding that the entire process created more problems for them than they had anticipated, the Council was eager to return the work to the House of Trade. Then in 1642, the local mariner's guild had a say in the matter. These three organizations also determined which vessels would be allowed to travel in the convoy, as well as issuing a limited number of licenses to them annually.

As an inducement to the private sector to construct a greater share of merchant vessels, the government announced that the owner of a vessel was permitted to ship cargo amounting to the equivalent of one third of the vessel's tonnage. Vessels which were provided with licenses, usually met all of the requirements of the House of Trade's inspection process, but those ships which provided their own weaponry including cannons and other guns, were given first priority on the list of those awaiting licenses. Another factor in a ship owner's favor was if he had served the king for a period of six years on one of his royal warships. The ships in the convoy were only allowed to carry a given amount of cargo tonnage, which was a proportion of an overall figure for the entire fleet. The Spanish regulations became less significant as the number of vessels which were constructed in the Americas began increasing. However, the vessels built in the Americas were provided with all of the same advantages which had been accorded to Spanish mariners in Spain.

Even though the regulations passed by Philip II stated that only 4,000 units of cargo could be carried by any given galleon, these restrictions were ignored in the Philippines. In fact, it was not unusual to find that a galleon carried as many as 18,000 units of cargo, which were packed in an assortment of crates, boxes, bales and packages, as well as a large number of Chinese jars which were not only filled with water and provisions for the crew, but were also full of ceramics and other export items. As larger vessels were constructed in the

Philippines from 300 tons to 2,000 tons, the amount of cargo they carried grew exponentially. An example of the excessive abuses of the restrictions on cargo allowances was provided by Le Gentil when he wrote that,

"On that basis the galleon *San Carlos de Borromeo*, which put to sea in 1766, while I was there, carried over a million pesos' worth of merchandise, which greatly exceeded the permission granted by the king. It is true that the vessel carried a thousand bales; but these bales or packages contained more than 4,000 package units (boletas), that is to say, more than 500,000 pesos without the pacotilla (the goods shipped by the ship's officers for their own accounts). But the Manilans had occasion to regret it. When the galleon arrived in Mexico a new viceroy was in command there. He was the Marquis de Croix, a Fleming, a harsh man, the Spaniards said. They considered him harsh because he was strict in the service of the king and in demanding obedience to His Majesty's ordinances. The pacotilla and the chests carried by the sailors were divided into thirds – two parts for the benefit of the king and one third for the owner. The bales were divided in the same way, but one part for the benefit of the king and the other two parts for the benefit of the owner. The commander of the galleon was obliged to remain in Mexico pending the receipt of instructions from the king, who had been informed by the viceroy of the abuses which had crept into the Manila trade. I was there when the galleon came back to Manila, early in July 1767. The news from Mexico caused the greatest consternation in the mercantile community of the city. Alarmed by the severity of the Mexican authorities, the experience made them more careful. It was arranged that in 1768 the same ship should be loaded with a 1,000 bales in such a manner that they should contain only 4,000 units of 125 pesos each (which would have been in compliance with the government's regulations for the galleons). "[113]

Another example on how cargo regulations were disregarded concerned the *Santa Rosa* galleon. The Spaniards in Manila were so determined to use every available space on this particular galleon for cargo that they even planned to make alterations to the vessel's structure. It was their idea to increase the size of the hold, while reducing the upper deck in order to provide additional space for more cargo. Le Gentil rightly questioned whether the changes to the ship's construction endangered the vessel, as it was built according to a set of proscribed regulations in order to ensure its seaworthiness. He wrote that,

"The *Santa Rosa* was at that time in commission. This vessel had a capacity of about 550 bales (of cargo) of 500 tons at the most. Now each bale is equivalent to about 500 pounds and consequently the

Santa Rosa could not carry more than 200 tons of merchandise. The ship although small had a splendid between deck space, five and half feet deep at least. She had been navigating for nearly 30 years in the American coastwise trade. The Manilans, accustomed to evade the king's ordinances, decided that this ship could not carry enough – that she had too much between the deck spaces. They thought that it would be advisable to increase the dimensions of the hold at the expense of the between deck space. I do not know whether this was a violation of the rules of ship construction, but however that may be, while the ship was in Manila, the foredeck was raised to a considerable extent so that instead of being able to carry only 550 bales the hold was gauged to carry 762. The 762 bales were ready to ship when the *San Carlos de Borromeo* arrived. The news brought by this ship convinced the people that they could not ship even 600 of those bales, for they were worth more than 500,000 pesos." [114]

The value of the goods taken aboard the galleon was established according to government regulations, but it was not uncommon for the investors to add additional merchandise to the cargo hold. This extra cargo was not included in the ship's register and often exceeded the cargo allowances set by the government during the years of the galleon trade. The returning galleon from Mexico also carried extra cargo sometimes as much three times the amount stipulated by the regulations. The vessel also carried the silver subsidy of 250,000 pesos for the management of the Philippine government. It was loaded onto the vessel under the supervision of government officials from the viceroy's office in Mexico City who arrived in Acapulco expressly to observe the process. A master of silver was sent on the galleon to ensure the safe keeping of the silver until it reached Manila.

As each galleon had a carrying capacity or tonnage, which could not be safely exceeded, it was necessary to prepare the cargo in a precise manner to conform to the weight allowances of the vessel. Every bale, crate and package, would eventually be evenly distributed and stowed aboard the galleon in its precise location in the hold, or above on the decks to maintain the integrity of the vessel. In cases where ships listed to starboard or port upon leaving Cavite or sank soon after departing from their moorings, this was usually caused by unevenly distributed cargo or a lack of sufficient ballast below the hold of the ship.

With the passage of time the process of shipping merchandise on the galleons became better organized and increasingly bureaucratic. During the eighteenth century, the cargo space on the galleon was divided into 4,000 units of merchandise or pieces "piezas." Each unit of cargo measured 2 feet 6 inches by 2 feet 10 inches. This is the equivalent of a medium sized trunk which could be filled with all sorts

of merchandise. For each unit of merchandise the Spanish shipper was issued a “boleto” or shipping ticket. The 4,000 units of merchandise were then consolidated into 1,000 crates, bales and bundles of cargo. Consequently, 1,000 shipping permits were issued to the individuals shipping cargo on the galleon. The merchants who shipped goods to Mexico had to pay an export fee. The funds which were derived from the export fee were used by the government to maintain the galleon and provide the costs involved in the careening and repairing of the ship when it returned to Cavite from Acapulco.

Although the Chinese merchants, who arrived in Manila from China, brought already pre-packaged bales of silks and other fabrics ready for transfer directly onto the galleon, the cargo was first transferred to the royal warehouses in Manila. There, customs officials inspected the cargo before it was loaded onto the galleon. The Chinese traders, who were quite familiar with the Spanish restrictions on cargo, had placed the requisite number of fabrics into the bales they brought to Manila. This meant that they did not have to be re-packaged in Manila, but could easily have been directly loaded onto the galleons from the junks. But by this time, the bureaucratic customs system in Manila was so convoluted that all goods destined for the galleon had to be placed in the warehouses for an inspection. Once there, the officials could determine the cargo’s value before it was loaded onto the vessel. In this way, they were able to determine the amount of duties they could impose on the Chinese cargo which had to be paid in Manila by the consignees of the goods. The inspection also allowed them to form an estimated figure of the customs duties the merchants in Acapulco would have to pay for the cargo when the ship arrived there.

The Spaniard who was shipping goods on the galleon received one or more shipping tickets for space on the galleon. If he was not planning to ship cargo on the galleon, he could sell the tickets to another Spaniard for 200 or 225 pesos. It was a common practice for individuals who were not sending goods to Acapulco to pool their shipping tickets together, and then sell them for a higher price to wealthier Spaniards. Each shipping ticket, for an individual unit of merchandise, could not exceed 125 pesos in value. By 1766, the units of cargo were valued at 200 pesos each rather than the 125 as required by government regulations.

The Spanish mayors and aldermen each received eight units of space on the ship. Members of the Tribunal of Commerce received a half share of a unit. Widows and destitute Spaniards each received a share of one shipping ticket of cargo space on the vessel, which was then divided into six shares with each individual receiving one sixth or two sixths of a ticket. As they were normally not expected to ship cargo, they combined their shares into one entire ticket and sold them

to other Spaniards for a higher price than the expected 125 pesos per unit of space.

As for the members of the clergy, including the archbishop of Manila, they were all allotted a given number of spaces on the galleon. When they received their shares of space on the ship, they were free to sell them to other Spaniards if they chose to do so or to actually use the space to ship their own goods for a profit. The clergy members, and in particular the Jesuits, received cargo space in return for their religious work in the community and for spreading Catholicism throughout the Philippines.

Cargo was shipped in a variety of containers of various sizes and dimensions and consisted of an assortment of hundreds of bales, crates, bundles, sacks, boxes, packages and jars. Delicate silks and other fine fabrics were primarily packaged in bales. Apparently, the Chinese employed by merchants in China and in Manila, who worked in shops in the Parian or in the royal warehouses, were considered expert packers. They could stuff a multitude of compressed silks into bales so tightly than anyone else was capable of duplicating. Large jars from China and other Asian countries served as dual purpose containers used to store provisions such as fresh water and other liquids, as well as foods and spices for sale in Mexico or to be consumed during the journey. They were also filled with merchandise such as smaller pieces of delicate ceramics and porcelain, ornaments and trinkets, which required a greater level of protection against breakage during the voyage. When serving as containers for delicate goods, the jars were filled with pepper and cloves which protected the fragile goods from breakage.

In comparison to the Philippines, the most commonly used type of packaging carried by the sea vessels in Spain were wooden barrels known as “pipas” and “tonels.” A leather container known as the “bota” was used to carry wine. Clay bottles or “botijas” were individually wrapped in woven baskets to protect the containers and carried 20 to 30 liters of liquids such as wine, oil and vinegar.

In conjunction with the packaging of the goods, a host of related businesses were created in Manila to cater to the needs of the merchants who were shipping goods on the galleons and officials involved in provisioning of the vessels. This meant that crates, bales, sacks, boxes, jars and other related containers had to be manufactured on a large scale to contain these items, as well as carry the provisions, supplies and equipment for the crew and passengers. A massive number of jars were required for water, oil, vinegar and other foods, which were consumed by the crew and passengers during the voyage.

All units of cargo were duly noted in the ship’s register and then the work of actually loading them onto the ship began. As the loading and

stowing of the cargo was managed by the registrar and the overseer, on hand was also the ship's master and an ensign of the vessel. The cargo was loaded onto the galleon by dozens of sailors, apprentices and laborers who carried on board the individual pieces of cargo, as well as the personal possessions of the crew and passengers, provisions, supplies and equipment. For heavier pieces of cargo and livestock, ropes and pulleys were used by hanging them onto the yards of the masts and around capstans to haul them onto the main deck. Most of the live animals were kept on the upper deck in pens. Cranes were not a common piece of machinery found in most shipyards, although the port of Seville did employ one and it was referred to as the "engine. "

Cargo was stowed in the hold and on other decks according to its value, fragility and space requirements. Silks and other expensive fabrics, which needed to be protected from water damage, were placed in dryer areas of the lower deck. Other bales and crates were stacked together, while barrels were laid down on their sides and stacked atop each other in the hold. The heavy barrels also served as additional ballast for the ship.

As the ship was loaded, the weight, value and type of packaging of the cargo, provisions, equipment and supplies had to be assessed to determine where on the vessel they would be stowed. There were provisions and cargo which had to be kept in dry areas of the vessel away from the possibility of their getting wet during the journey. Those items deemed less valuable and heaviest were stowed in the central sections of the hold. Many of the ship's cannons and other weaponry, which were not expected to be used, were stowed in the hold and, of course, this meant that if the ship came under attack it was usually unprepared for battle. Any available space remaining between the various packaged goods was filled with smaller bundles of lesser quality fabrics, which also served to support the larger bales and crates against movement. Ropes were used to secure the cargo from shifting about during the voyage.

With regard to the loading of vessels in Spain, government regulations of the sixteenth century stated that the upper decks and cabins had to remain free of cargo to avoid overloading the ship. These regulations were ignored in Manila. According to government regulations only the ship's artillery, provisions and the luggage of the passengers were permitted on the upper decks. Any cargo stowed in the fore or aft superstructures of the galleon was strictly forbidden. There were also restrictions on how many passengers a vessel could carry, which was calculated according to the ship's tonnage. For a ship of 100 tons, it was only permitted to carry thirty passengers.

In addition to the cargo, the ship was provided with all the

provisions needed for the six to seven months journey to Acapulco. Stores of supplies and equipment were also loaded onto the vessel and these included additional wood used as firewood for cooking and by the carpenters to repair masts or planks during the voyage. Iron and other metals, which might be required by the ship's blacksmith, were loaded onto the ship, as well as additional sail cloth used by the sail makers on board who made repairs to the sails when necessary or produced new ones if needed. The ship had to carry a host of other incidentals required for the day-to-day running of the vessel. The surgeon came aboard with his medicines and surgical equipment and the cook with his kettles, pots and pans.

The officers brought onto the ship their private supplies of provisions, which included fine foods and wines. While the passengers equally provided for their own comforts during the journey, bringing servants, provisions and live animals including hens for a daily supply of eggs. During the journey, animals brought on board by the officers and passengers would be routinely slaughtered for food. A mountain of luggage was often taken on board, which consisted of an assortment of trunks and crates and boxes belonging to the Spanish officers, sailors, soldiers, priests, merchants, government officials and their families who were all sailing to Acapulco. Lowly members of the crew were each allowed to bring one trunk of personal possessions.

Even though the ship could only carry a certain amount of weight, given its tonnage capacity, it was often difficult for those involved in the managing of the vessel or traveling on the galleon, not to be tempted to overload the ship. If the individual was unaware of the carrying capacities of sea vessels according to their tonnage allowances, it was easy to see that in their ignorance they kept trying to load even larger quantities of cargo onto the vessel. This may also have been due to the fact that they were aware of the profits to be made in Mexico from the sale of Asian goods. In addition to the cargo listed in the ship's register, the vessels usually carried several times more cargo which was composed of smuggled goods.

An example of an overloaded vessel was the *Santa Maria Magdalena,* which had been carrying a great number of jars from China, Thailand and Vietnam. The jars had been filled with trade goods and provisions for the journey to Mexico, but as she was so heavily laden with cargo, she sank soon after departing from the port of Cavite in 1734.

When describing the overloaded galleons, the chronicler Gemelli, stated that the vessels resembled floating gardens. He said that as they sailed from Cavite to the San Bernardino Strait, the galleons carried so many fruits, vegetables and animals on the main deck, as well as additional cargo, that it would have been almost impossible for anyone to walk along the deck without bumping into something.

Every bit of available space was used for cargo or provisions, and whatever space remained, served as the sleeping quarters for the crew who slept wherever they could.

Penalties for Smuggling Goods on the Galleons

It had become a commonly held practice for individuals to falsify the value of the goods they shipped to Acapulco. The goods would later be sold in Mexico for substantially higher prices. Illegal goods were also hidden from the authorities in a variety of ways such as within bundles of goods, which were usually never opened by officials in Manila. The lax situation in Manila amongst the customs officials meant that many who traveled on the galleon, could blatantly smuggle merchandise into Mexico unless discovered by customs officials in Acapulco. But there is every indication that these same customs officials may have looked the other way when goods were smuggled into the country especially if they received a gift for doing so.

In Spain, smuggling was a continuous problem for the government. Even though the regulations stated that every vessel was required to carry a ship's register, and the fact that the cargoes were subjected to customs duties, the smuggling activities continued to be an irritating fact of life for the government. In an attempt to curb the activities of smugglers and the loss of customs revenue for the royal treasury, the government issued a number of regulations regarding this type of crime. A law was passed in Spain in 1580 which stated that any officer on a ship, even the captain, could not carry undocumented cargo on the vessel for another individual. If the authorities found that this was the case, during a ship's inspection, the merchandise was confiscated. Moreover, the smuggler was compelled by the government to provide the real owner of the merchandise with a payment for the loss of his goods.

Another regulation of 1593 stated that if an officer of a vessel was caught shipping unregistered cargo he risked losing his ability to work in that capacity on another vessel for four years. If the apprehended smuggler was a crew member, he was sentenced to hard labor on galleys for four years. Similar harsh penalties and punishments were doled out to individuals such as merchants who were also involved in shipping unregistered cargo. But the problem of smuggling and shipping contraband cargo continued in Spain, in the Americas and also in the Philippines. Some Spaniards in Manila, who were hungry for wealth and fortune, were willing to take the risk of smuggling goods on the galleon.

Informers were rewarded for revealing the names of persons involved in smuggling activities. In regulations passed in 1552, if an individual informed the authorities of smuggling activities on a vessel,

he received one fifth of the value of the unregistered goods. If the discovery of the smuggled goods was uncovered after the register had been finalized, and prior to the ship's embarkation from a port, the informer received one fourth of the value of the goods. Later on the rules covering the informer's share was set at one third, which was divided between the informer and the judge who was handling the case. This particular judge could not be associated with the House of Trade, but was instead a member of the government's judiciary system. By 1638, the rules regarding the informer and the smuggler changed. The informer was paid a reward after the smuggler was arrested.

There was also another set of penalties covering the falsification of information contained in a ship's register. During the early years of the sixteenth century, for example, goods were confiscated if they were falsely listed under someone else's name other than the true owner of the cargo. If the same individual committed the offense once again, on another vessel, not only was the cargo confiscated, but also half of his own personal property was taken by the government. If an informer was involved in the disclosure of the falsification, he received one fourth of the value of the confiscated property and the presiding judge also receiving one fourth. After sentencing the criminal, the government received one half of the value of the confiscated property after it was sold.

The penalties for smugglers in Spain are interesting from the standpoint of how they may have been applied to the transpacific galleon run. The officers involved in the operation of the vessels fully realized that carrying smuggled goods was a criminal offense. But it was not unusual to find that captains and other officers, including the lowest ranking crew members, all carried within their personal possessions some amount of merchandise that they planned to sell in Acapulco. As they were allowed to carry personal possessions onto the ship, they could not be taxed by the customs officials in Acapulco for these items. In any case, the officials in the port city were mainly concerned with the documented cargo listed in the ship's register. There is no doubt, that if the customs officials had discovered an enormous cache of goods, which had not been registered, they would have automatically confiscated these items. The confiscated goods would have been sold in Acapulco and the funds turned over to the royal treasury.

However, there were customs officials in Spain and in the Americas who were involved in the receipt of smuggled goods and cooperated with the offenders. It was difficult for the Spanish government in both regions to completely monitor all of the activities of the ships, their officers, the cargo and smuggled goods. They made every attempt to

minimize smuggling, and this was obvious given the level of bureaucracy that they had established over the centuries to control every aspect of the vessels. But in many cases the activities of smugglers often went undetected by government officials.

The activities of the officers on the Manila-Acapulco galleon were questionable if taken into consideration that to some extent they were involved in carrying clandestine cargo on the ship. It was apparent that the captain was taking additional cargo on the ship, which under the regulations stipulated by the House of Trade, he was allowed to do so, but there were other officers on the ship who were involved in possible criminal activities. The silver master of the galleon, who was usually found on the galleons sailing from Acapulco to Manila to guard the silver subsidy for the colony, received half a peso for every 100 pieces of silver under his watchful eye. Other officers on the ship such as the pilots and lieutenants also received a share of commissions for extra cargo placed on the ship. Perhaps this was hush money to ensure that they did not inform the officials in Manila and in Acapulco of their activities, but apparently it was less likely that an informer would divulge the extra cargo to the authorities if all the officers aboard the vessel were participating in the same activity. As Zuniga stated in 1800, there were many methods by which officers could increase their incomes. He said, “In addition to saving 1,500 pesos for their transportation, they enjoy a salary, receive commissions, engage in trade, and in their trunks they never forget to put something by stealth so that their earnings will total no less than 4,000 pesos or 5,000 pesos aside from what they get by engaging in business.” [115]

The profits the merchants, investors and middle-men earned through the Manila trade run were enormous. Paying a share of the expense of outfitting and running the galleon or paying commissions to individuals for the favor of taking their cargo onto the vessel whether it was registered or unregistered, paled in comparison to the overall profits they earned when the goods were actually sold at the Acapulco trade fair. There were millions of pesos at stake every time a galleon sailed from Cavite to Acapulco, and if the ship was lost for one reason or the other – through the affects of the weather, poor construction of the vessel or an attack by enemy vessels - the loss of the profits on the cargo was often more deeply felt in Manila than the loss of lives. The profits the merchants earned on the sale of their goods in Acapulco ranged from one hundred to three hundred percent. The galleon trade was such a lucrative venture that few Spaniards in Manila could resist the temptation to participate in the trade knowing that it could afford them with great wealth or destitution if the ship failed to arrive in Acapulco.

The only way to actually curb the traffic in undocumented goods

would have required that the officials in Mexico open and inspect each and every bale, crate and bundle on the ship. But the officials were not interested in carrying out such an intense inspection of the cargo. Apparently they felt that it would have taken too much time to actually open every bit of cargo, measure, weigh and count the contents of each unit of cargo. This would have also entailed hiring more inspectors than they had in Acapulco, and they did not have the funds to pay additional salaries. Instead of this type of thorough inspection, the customs officials assessed the incoming cargoes at a higher rate taking it for granted that some portion of the cargo most probably contained unregistered items.

The fact that the Spanish government passed so many regulations to monitor the activities of the galleons confirms that where smuggling was concerned, the system was not fool proof. When the *Santa Ana* was captured off the coast of California in 1587 by Thomas Cavendish, he helped himself to a cargo valued at two million dollars. He returned to England a wealthy man. As he sailed along the Thames in London, he showed off his wealth by decorating the ship with rigging draped in Chinese silks. At the time, the value of the cargo he seized was estimated at a value of 500,000 pesos, but there may have been more cargo on the vessel than was stipulated in the register. In any case, it would have been sold in Acapulco for two or three million pesos. Another example of a British commander who became excessively wealthy after capturing a galleon was that of Lord Anson. When he captured the *Nuestra Senora de la Covadonga* in 1743, the ship was carrying more than one million silver dollars and 35,862 ounces of silver bullion. The ship had been returning from Acapulco to Manila when captured and the value of the cargo clearly indicated that it was carrying more cargo than allowed as it was valued at 750,000 pesos.

Chapter 10

Officers and Crew

The men, who were recruited to work on the merchant vessels and the warship galleons in Spain, generally came from the towns and villages of Andalusia and from the Cantabrian coastal areas of the country. In particular, the mariners of the Basque region were highly sought after for work on the vessels as shipwrights, master carpenters and crew members.

If the ship was built in Cavite, then men in Manila, and its surrounding areas, would have been required to man the vessel. Filipinos made up the majority of the men conscripted for work on the ships, while Chinese, Japanese and other Asians in Manila would have joined a ship's crew as hired employees. As so many vessels arrived in Manila from Asian ports, to sell or buy goods, there would have been sailors aboard those vessels who chose to stay and work in the city. It is clear that the men in charge of the operation and the construction of the vessels were Spaniards, but there were many Mexicans of Spanish descent that chose to work on the galleons for one reason or the other. Perhaps they worked on the ship in return for a free passage home or simply due to the fact that they were professional mariners. Moreover, young Filipino children would have been recruited to work as cabin boys, while slaves were also part of the cultural scene of Manila until the early eighteenth century when Spain banned the practice of slave ownership. They too would have been part of a ship's crew.

In Spain, the number of men needed to man a warship was initially about 70 (not including soldiers), while a merchant vessel such as the Manila galleon would have required approximately 60 to 100 men or more depending on the size of the vessel. The number of crew on any given vessel would also have fluctuated if the vessel was involved in combat. This was the case with the *San Diego* galleon when it was involved in a conflict with Dutch enemy vessels in Manila Bay. In December 1600, the vessel carried approximately 300 men, who were mainly soldiers and Spanish dignitaries from Manila.

As example of the number of men needed to crew a Spanish convoy from Spain to the Caribbean, the fleet under the command of Francisco de Coloma in 1594, embarked from the peninsula with twenty vessels and 7,149 crew members distributed amongst the warships and merchant vessels. This meant that on average, each vessel carried 350 men. As a result, a tremendous number of men had to be found in Spain to man the enormous fleets. A similar situation

also existed in Manila, but on a much smaller scale. Given the fact that the number of vessels involved in the Spanish fleets ranged from twenty to as many as fifty vessels in some years, the Manila galleon in comparison traveled alone from the Philippines to Mexico. However, the problem of finding suitable crew members was apparently a continuous problem in Manila.

When the vessels became larger and their tonnages increased, the number of men required to man a Manila-Acapulco galleon grew exponentially. By 1732, a galleon of 500 tons required 150 to 250 men to operate the vessel. The 2,000 ton *Nuestra Senora de la Santisima Trinidad* sailed in 1762 and carried a crew of 384 men. This figure included 100 experienced Spanish sailors, 100 common sailors (probably Filipino and other Asians), 44 soldiers, 40 gunners and other crew members.

It is interesting to note that the galleons carried slaves. The slaves were brought to Manila aboard Portuguese and Asian vessels in order to sell them in the city. They had been captured in India, Malabar, Timor, Cochin-China, Africa (Guinea and Mozambique), as well as the Cape Verde Islands. The presence and sale of slaves in Manila was a common-place practice until 1608 when Philip III, prohibited the continuation of slavery in the Philippines. Despite the king's prohibition, the slave trade continued as it was difficult ending the practice, which was considered indispensible. The slaves who worked on the vessels performed the lowliest jobs on the ships as servants of the Spaniards or crew members. When the vessel arrived in Acapulco, they oftentimes managed to remain in Mexico or were sold by their owners.

Their descendants can still be found in Mexico and particularly around the areas in and around Acapulco. Studies have been ongoing in Mexico on the origins of the descendants of the African slaves in the country by scholars such as Maria Eliza Velazquez and Ethel Correa in their study "Africanos y Afrodescendietes en Acapulco y la Costa Chica de Guerrero y Oaxaca." They have acknowledged that this is an area of study of which little is known. "Regarding the Africans and their descendants in Acapulco, presently there is still little information known about them. There are historical studies of the State of Guerrero, which includes information on the Port of the Southern Seas (Acapulco) and emphasizes the importance of the annual commercial fair of the China ship (Manila galleon) during the time of the viceroyalties. There is also demographic information for the city and histories from the fourteenth century to the twentieth. Little information is provided in the histories about the port and its inhabitants and those of African origins. Even though little has been written about this, the government of Acapulco understands the

importance of knowing about this group of people in its history. ”

Other individuals on the galleon included a handful of Europeans who were recruited in Mexico or in Manila. It was not unusual for the galleons to be commanded or piloted by Europeans who were hired for these positions. It was at times difficult to find qualified Spaniards for these jobs. For example, in the case of the *Nuestra Senora de la Covadonga*, the captain was a Portuguese, Don Jeronimo Montero. It is also interesting to note that Fernando Magellan was also a Portuguese in the employment of the Spaniards when he made his historic voyage to the Philippines in 1521. However, the majority of the officers on the galleons would have been Spaniards.

On Magellan’s voyage to the Philippines, there were 265 men in the expedition. Of this figure ninety of the men were foreigners. They arrived in Spain from as far away as Ireland, Greece, Italy, Germany, France and Portugal to join Magellan’s exploratory journey. By 1724, as less Spaniards were available to completely man all of the jobs on a galleon, it was difficult finding a ship that had more than one third of its crew composed entirely of Spaniards. No foreigners were allowed to work on the vessels unless they had become residents of Spain and were Catholics or converted. For this reason, many men decided to marry Spanish women in order to become eligible to remain in Spain and work there in business or on the ships. But despite the fact that they were Catholics and residents in Spain, they were generally not allowed to hold positions of authority on the vessels as officers.

Still, there were foreigners who passed themselves off as Spaniards in order to work on the ships. Consequently, the sea vessels traveling from Spain to the Americas were often manned by mariners from a variety of European countries. In Seville, men arrived there from across Europe in search of much needed employment. Working on the warships were German, Italian and Flemish gunners, and of every three gunners on a vessel, at least one of them was from a foreign country. To the dismay of the Spanish navy, this was often seen as a problem and possible threat.

In Spain, during the sixteenth century, many of the members of a ship’s crew, which included the ship’s master and sailors, were hired for a single voyage to the Americas. Once they arrived at the port of destination, they were basically free to find other ships to work on or return to Spain on the vessel they had been working on. It was not unusual for many to decide to stay in the Americas and seek out their fortunes.

Many of these same mariners, after arriving in the Caribbean or in Mexico, became the officers and crews of the Manila-Acapulco galleons. As the galleon trade was seen as such a lucrative business, many enlisted as officers and crew members in the hopes that they too

could earn extra money from the enterprise. Even though the work on the vessels was often brutal, and the duties of a sailor consisted of non-stop work, they were willing to serve on the transpacific vessels. The passage from Spain to the Caribbean, and then from Mexico to Manila, were both risky crossings with vessels at the mercy of the elements and possible pirate attacks. But, again, the main reason for joining the galleon was the money involved.

The sailors who sailed from Mexico to the Philippines were told by the Spanish government, that they would receive a salary of 350 silver pesos with 75 pesos provided to them in advance. When they returned to Acapulco from Manila, they received the balance of their salaries. Consequently, they endured the hardships of the journey knowing that their remaining salary awaited them in Acapulco, but they also tried to earn some extra cash by taking small bits of merchandise from Manila for sale at the Acapulco fair when the galleon arrived there. These, two factors made their decision to join the crews of the vessels in their minds all worthwhile. But then, in most cases, this was the only type of work they were able to perform.

"Notwithstanding the dreadful sufferings in this prodigious voyage, yet the desire of gain prevails with many to venture through it four, six, some ten times. The very sailors, though they forswear the voyage when out at sea, yet when they come to Acapulco, for the lucre of two hundred and seventy five pieces of eight the king allows them for their return, never remember past sufferings. The whole pay is three hundred and fifty pieces of eight, but they have only seventy-five paid them at Cavite when they are bound for America – for if they had half, very few would return to the Philippine Islands for the rest." [116]

According to Carreri, all crew members on a galleon had to produce a license indicating that they had been given permission to sail on that particular vessel. As he travelled aboard the *San Jose* galleon, which sailed from Manila to Acapulco, he said that at one point, when the ship was closer to the San Bernardino Strait, the ship's master checked the crew to make sure that each person had a license to sail. The ship's master found that sixteen crew members were not in possession of the license and as a result, they were put ashore.

One informative description of the type of men who joined the crews of sea vessels has been provided by the sixteenth century Spanish navigator, Juan de Escalante de Mendoza. He wrote that, "Most of the mariners who sail the sea are of two sorts. The first sort includes all those who commence to sail as a livelihood, such as poor men and sons of poor fathers. Seafaring is the most suitable occupation they can find to sustain themselves, especially for those born in ports and maritime areas. This sort is the most numerous among mariners, if we understand that, although they might want to

be schooled for some other occupation, they do not have the disposition or the means to be able to do it. And also if we understand that, if some of them chance to study and become learned, they would not want to follow an occupation as dangerous and laborious as that of a mariner. The other sort from whom mariners are made consists of those whose nature inclines them toward the restlessness and the art of sailing and military occupations. Although their fathers or tutors might set them to study and give them every advantage, something else appeals to them and they generally abandon their studies to follow their natural inclinations." [117]

There would have been Spanish and Mexican officers and crew serving in key positions on the galleon as they were the most familiar with the rigging and sails used to operate the vessel. Orders to operate these components would have been hurriedly given and executed and unless one spoke Spanish, it would have been difficult carrying them out quickly. It is possible that Filipinos and Chinese crew members were trained to handle these operations if they spoke Spanish, but most likely it was the Spaniards and the Mexicans who were involved in handling the rigging and the sails out of the necessity to perform these jobs rapidly especially during rough seas and storms.

The vessels of Spain's Atlantic fleets and eventually the Manila-Acapulco galleons, established a customary hierarchy of command aboard the ships, which ensured their smooth running and safe arrival at their designated destinations. As the practice of selecting the officers for the fleets and individual ships, which participated in the Atlantic convoys, had been long established in Spain, this routine was also well-known in the Philippines. Evidence for this fact has been provided by the former governor of the Philippines Fernando Valdes Tamon. He prepared a number of reports for Philip V in 1739 in which he detailed the country's military fortifications, galleons and cities in the archipelago which were then under Spanish rule. In the reports, he also mentioned the individuals who were involved in the construction of the galleons at the port of Cavite, as well as the officers who were hired for employment on the vessels including their salaries.

As an eye witness to events which took place in Manila in 1736, he was able to view the preparations for the sailing of the *Nuestra Senora de la Covadonga* from the Cavite shipyard. This was the same galleon which was later captured in the Philippines by Commodore George Anson in 1743. The *Nuestra Senora de la Covadonga's* crew included the following individuals: the ship's master, first mates, third officers, petty officers, boatswain, surgeon, chaplain, artillery sergeant, scrivener/notary, dispenser (steward), water bailiff/dispenser, divers and carpenters. There were 64 artillery gunners; 160 marines and

sailors; 72 Spanish cabin boys, and 120 additional cabin boys (who were most probably Filipino children).

Hector Diaz Velasco and Jorge Nacif Mina provided a more complete list of a typical galleon's complement of officers and crew in their work entitled "Los Naos de China en la Cuidad de los Reyes." They focused on one galleon dating from the 1760s. The officers and crew of this particular galleon included the following individuals:

"Captain General, Capitan de Navio (naval captain), Primer Theniente de Navios y Capitan de Ynfanteria (first naval lieutenant and captain of the infantry), Second Theniente de Navios (second naval lieutenant), Theniente de Ynfanteria y Alferez de Navio (infantry and naval lieutenant), Alferez de Ynfanteria (infantry lieutenant), Contador Escrivano (accountant), Maestre de Plata (silver master), Capellan (chaplain), Cirujano (surgeon), Primer Piloto (chief/ first pilot), Segundo Piloto (second pilot), Tercer Piloto (third pilot), Contramaestre Primero (ship's master), Segundo Contramaestre (boatswain), Guardian Primero (Steward), Segundo Guardian (assistant steward), Condestable Primero (chief gunner), Segundo Condestable (second gunner), Maestre de Xarcias, Maestre de Raciones, Despensero (dispenser), Maestro Armero (master gunsmith), Maestro Carpintero (master carpenter), Maestro Calafate (caulker), Maestro Tonelero (master cooper – barrel maker), Buso (diver), Alguacil de Agua (water dispenser), Cosineros de la Tripulacion (cooks), Artilleros de Mar (artillery men of the sea), Marineros (sailors), Gurumetes Espanoles (Spanish apprentices), Gurumetes Sencillos (common apprentices perhaps non-Spanish i.e., natives of the land), Sargentos (sergeants), Tambor (drummer), Cavos de Escuadra, Soldados (soldiers)."

The ship also carried specialists who were able to produce items needed on the galleon during its voyage, as well as individuals who were employed in the management of the vessel. For example, the ship carried a procurement officer (proveedor), who was a purchasing agent. He was in charge of supplying the ship with water, firewood, provisions, supplies, equipment and weaponry. The procurement officer and the ship's master were both involved in attending to the repairs and careening of the vessel. In the Philippines, many of these duties were handled by the ship's master. As there was usually only the one galleon travelling from the Philippines to Mexico on a yearly basis, the responsibilities of operating the vessel mainly fell on the shoulders of the master. Another specialist was the accountant/ comptroller (contador). His duties entailed auditing and certifying that the contents of the ship's register were accurate, as well as maintaining and recording any other documents which were related to the cargo. There were a number of other government functionaries

involved with the galleon when it arrived at the port in Acapulco, and these included the customs guards (guadamayor); the Royal Treasury's chief clerk and a license commissioner who was responsible for issuing licenses for cargo which was transported to inland destinations from the port.

The Captain General of Sea and War (Capitan de Mar y Guerra)

There was basically only one difference between the hierarchy of a ship's command in the vessels of the Atlantic fleet and the galleons of the Philippines and Mexico. The difference was based upon the fact that in the Philippines, there was generally only one vessel traveling to Mexico every year, while in comparison, a Spanish Atlantic fleet consisted of as many as twenty to fifty vessels. In command of the entire fleet was the captain general of sea and war or "Capitan de Mar y Guerra." In the Philippines, however, if two vessels or more sailed from Cavite to Acapulco, one man was designated captain general for the fleet and another was designated the admiral. The captain general sailed on his flagship, the "capitana" and the admiral on his vessel the "almiranta." This was also the case in the Atlantic fleets. The admiral and the individual captains of the vessels in the fleet reported to the captain general. After 1593, when Spain began restricting the galleon trade run from Manila to Acapulco, the lone vessel was commanded by a captain general. In the Philippines, the captain general was appointed to that position by the governor in Manila.

In sixteenth century Spain, the position of a captain general of a fleet was appointed by the king, and the individual selected, was usually a member of the Spanish aristocracy or distinguished for his military exploits on land, rather than on the sea. He was appointed to command the "Armada del Mar Oceano," that is, the warship galleons and the merchant vessels in the fleet sailing from Spain to the Americas. For his services, as the captain general, he received a yearly salary of 2,400 ducados (one ducado equaled 11 silver reales). While he was in the king's employment, he was prohibited from engaging in buying or selling merchandise.

The man chosen for the post of captain general was described by Juan Escalante in his 1575 book on navigation, "Itinerario." He wrote that the candidate should be, "a very good man, of good family and well born, a native of Seville, a good Christian and experienced on the sea, since he has made other voyages on this same course to the same destination. He is discreet and very fair and even handed in dispensing justice, well intentioned and understanding, vigilant and careful of everything in his charge, affable and of a proper age, neither old nor young. Along with being very brave, forceful and skillful with weapons, he is also slim and fit, because he can jump agilely into any ship in the fleet, no matter how rough the sea and wind. He is not

covetous nor greedy nor avaricious, but generous, sharing whatever he has with the soldiers and officers of the fleet, and all are content with him. He is determined in all his duties and careful that punishments due are given, and very diligent in pursuing any opportunity for battle with the enemy. He has good judgment and is circumspect in all his duties. He is sober and temperate in eating and drinking, and very disinterested in the use of his charge and command, because he has no business interests of his own, contenting himself with the ordinary salary of his office, although it is not as much as he merits. In all the fleet, (the officers) are very content to have such a good captain general and they pray that God protects the king for many years for appointing such a man to the job."[118]

Before a convoy set out on its voyage, the captain general was expected to make an official inspection of the fleet ensuring it was fit for the journey. The ships, crews and provisions had to be accounted for and prepared for the voyage, as well as carrying the necessary weaponry and ammunition to ensure that if attacked the ships would be able to protect themselves and the other vessels in the fleet. By then, the course to be followed across the Atlantic, along the Carrera de Indias (Indies route), had been plotted out by the chief pilot assigned for the entire fleet (individual pilots were also assigned to each ship in the fleet and reported to the chief pilot). At this point, the other captains of the individual vessels in the fleet were informed of the course they were to follow to the Caribbean. It was the captain general's responsibility of announcing when the fleet was to begin its journey. Consequently, a cannon was fired six hours before the start of the journey to signal that the fleet was about to depart from Cadiz to the Americas.

As the captain general's appointment was considered one of the highest and most important positions the king could confer upon an individual, when he arrived at his destination, he was put in command of the entire port. As such, the port's defenses were placed in his hands until his departure with the fleet. This was the case in Havana, where the fleet reassembled to make the return journey to Spain, after concluding all of its business in the Caribbean - at Cartagena, Panama and Veracruz. When there were two fleets in the Caribbean, and two captain generals, the first captain general to arrive at a port, was placed in command of the port until the two fleets departed together for Spain. At that time, the second captain general was placed in the position of admiral for the fleet.

The Admiral (Almirante)

The second in command of the fleet was the admiral or "almirante," who was appointed to that position by the captain general. He sailed aboard the vessel known as the almiranta.

The admiral had the responsibility of ensuring that all of the vessels in the fleet were appropriately maintained and seaworthy. He also had to ensure that they were properly manned, supplied and equipped with weapons and ammunition. As a result of the many duties that fell onto his shoulders, the admiral was generally selected for his nautical and military experience. Many admirals were skilled military men who at some point in their careers also worked on sea vessels as soldiers. Combining the experiences garnered on land as military men, and then as members of a ship's crew, provided the individuals who became admirals, with invaluable experiences and the expertise to carry out their duties in the fleet. By the end of the sixteenth century, the admiral received a yearly salary from the king for his services.

It was not unusual to find that a captain general or an admiral owned the vessel upon which they sailed. The king often rented privately owned vessels for the fleets, and in turn, the owner sailed aboard his ship in the capacity of a captain general or an admiral. As the owners of a galleon, both the captain general and the admiral may have had to resort to borrowing loans in order to maintain their vessels. This, in essence, turned them into businessmen, as they collected the rental fees from the king for their ships, but also entailed the need to crew, supply and maintain the vessels at their own expense.

The Captain of an Individual Galleon (El Capitan)

In the Atlantic fleets, every vessel in the convoy was commanded by its own captain or "capitan." The captains reported to the captain general of the fleet as already mentioned. In the case of the Manila galleon the ship was under the command of a captain who was also referred to as a "captain general" even though there was only one vessel sailing in any given year between the Philippines and Mexico.

Some captains were appointed to command a galleon as they had a military background and could organize the defense of the vessel if attacked by enemy ships. Other captains were assigned to the ship as they already possessed a nautical background and knew how to sail and pilot a sea vessel. But the despite the fact that there was a captain aboard the vessel, the daily management and organization of the ship was the responsibility of the ship's master. Between the captain, the ship's master and the chief pilot of the vessel, they were all instrumental in safely sailing the ship and making sure it reached its destination.

Without the requisite number of officers and crew to manage the galleon's voyage, from Cavite to Acapulco, it would have been impossible to ensure its safety and maintain discipline on the vessel. Every individual had a role to play in the smooth running of the galleon as he carried out his duties each day. Without everyone

knowing their individual positions on the ship, and what was expected of them, the galleons would not have been able to continuously sail so successfully throughout the hundreds of years that they did sail without too many disasters occurring in the process.

From time to time problems did occur within the established system of operating the galleons, and this was often due to the placement of incompetent officers in command of the vessel or with structural problems in the ship. Attacks by enemies at sea were also another difficulty those in command of the galleons had to endure. In the case of the officers of the vessel, they may have been unwisely chosen by the governor in Manila who was involved in the selection process. For example, in the case of the *Nuestra Senora de la Concepcion* (see Chapter 1), the captain of the ship was the inexperienced and young nephew of the governor.

In some cases, when a new governor was assigned to the Philippines, he was given the command of the vessel as a sign of respect given his elevated position in the Spanish government. As such, he could give orders to the captain of the ship even though he may not have had any nautical experience or know-how. Still, he was permitted to assume the highly important position on the ship merely because of his station in life. Of course, the individual would have had the services of the ship's master, who was actually in charge of managing the vessel in conjunction with other officers, so that the galleon usually arrived in Manila without mishap.

In 1599, through a royal order from Philip III, the governor of the Philippines was given the authority to appoint the captain of the galleon. The royal order was again sanctioned in 1604, 1608 and 1620. This measure created a great disturbance in Mexico City where the viceroy was uncomfortable with the decision. But in Manila, the governor was overjoyed by the royal order as the appointment of the captain meant that he was in a position to receive a valuable gift from the candidate chosen for the position. Once the post of captain had been filled, and the individual received his appointment papers, he was provided with a salary of approximately 50,000 to 100,000 pesos per voyage. The salary was gathered from the merchants and investors in the trade run as their share of the expense of running the vessel. He also received 1,000 pesos from every passenger on the ship, and if he was the captain employed on the returning galleon from Acapulco, in addition to his salary, he received 500 pesos from each passenger on that vessel. He also received a four percent commission from the consignees of the cargo listed in the ship's register and for the inclusion of unregistered cargo. Moreover, he was able to sell merchandise on the ship which was listed as his own personal possessions.

By the 1800s, the governor of the Philippines was no longer involved in the selection of the captain of the galleon. The selection process was assumed by the Spanish government in Mexico. According to Zuniga this decision came a bit late as the galleon trade was about to end in 1815, so it made little difference to the overall management of the vessels. However, it is interesting to note that one of the reasons for the change in policy had been due to the fact that the captain selected for the post was oftentimes unqualified, which was the case in the *San Diego* and the *Nuestra Senora de la Concepcion*. Regarding the *San Diego*, Dr. Antonio de Morga, a judge in Manila's Royal Audiencia, was appointed captain of the ship, while the *Nuestra Senora de la Concepcion* was commanded by the governor's young and inexperienced nephew. With reference to the new policy, Zuniga pointed out that, "At present, the king has revised this system by sending to the colony naval officers (each of whom takes command of two galleons) and has issued orders that in the absence of a commander appointed by the Spanish Court, the oldest officer in point of service be appointed commander. This arrangement has taken away from the governor the right to appoint this official, a loss of power which they resented very much. But this move, I believe, will return to the benefit of commerce because fewer boats would be lost, as the commanders would be more intelligent and better trained for their jobs, and also because, being used to punctuality, the galleons will leave on schedule. This did not happen before because the commander, who is an intimate friend of the governor, delayed the galleon's departure in order to wait for the coastwise boats so that they may carry their goods. This delay has resulted in many subsequent losses. "[119]

In Spain and in the Philippines, there were two types of captains serving on the galleons in the sixteenth and seventeenth centuries. The first was a "Capitan de Mar" or a "Captain of the Sea," who was an experienced mariner. The second was the "Capitan de Guerra" or "War Captain," who was an army commander. As such, he was usually unfamiliar with naval matters, and when assigned to command a ship, he was basically in charge of the soldiers on board the vessel. He left the ship's daily operation to the master and the navigation to the pilot. If the ship was attacked by an enemy vessel, he commanded the soldiers and the use of the weaponry and ammunition to defend the ship. Nevertheless, he was involved in the ship's operation to the extent that he worked in conjunction with the master and pilot issuing orders as required. The captain was also involved in maintaining law and order on the vessel. If there were any punishments to be meted out, he was in charge of this and making sure that discipline was maintained. The "Capitan de Mar," on the other hand, was an

experienced mariner and capable of sailing and piloting the vessel. When he was in charge of a galleon, the soldiers on the ship reported to an officer who was usually an infantry lieutenant.

The Ship's Master (Contramaestre Primero)

Even though the galleon was commanded by a captain, the person who was really in charge of running the day-to-day operations of the vessel was the ship's master. As the second officer in command of the vessel, the master was required to be a highly experienced mariner, as well as a businessman due to the fact that his responsibilities carried over to the administrative side of operating the ship. He was also expected to be highly skilled in the management of sea vessels, as well as knowing the art of navigation. If necessary, he could use navigational instruments, read maps, charts and set a course for the vessel. He worked closely with the chief pilot to ensure that the vessel remained on course throughout the voyage. When he was in charge of a galleon, he usually had a chief pilot and two assistant pilots on board the vessel in case one of them became incapacitated or died. With respect to the navigation of the ship, he was not permitted to interfere with its navigation except to maintain the ship's course. In a similar fashion to that of the chief pilot, the ship's master was required to pass examinations indicating that he was qualified to operate a sea vessel.

A good ship's master in Spain was expected to have the following characteristics which would have also applied to the Philippines. He was usually an older man in his thirties or forties and if the captain died, he assumed command of the vessel. He was expected to comply with all of the laws and regulations imposed upon sea vessels by the Spanish government and that these were legally carried out. "The masters' good reputation and the confidence that he could inspire were the principal qualities that persuaded others to entrust great quantities of wealth to his hands. The master was appreciated for his honesty or better said, for the loyalty at the margins of the law for their mutual benefit. The payment of taxes to the Spanish crown was collected by the masters from the proprietors of the cargo, but the state also charged him with impeding the passage of illegal emigrants and the desertion of mariners in America, converting masters in fact into the executors of its migration policies. In general, one could say that the House of Trade considered the masters responsible for any infraction of the ordinances that occurred on board the ships. Masters faced legal actions as soon as they arrived in Seville after their return voyage which could lead to their being incarcerated if any irregularity was suspected." [120]

During the voyages, the captain and the chief pilot communicated their orders to the master, who in turn, conveyed them to the crew. It

was also his responsibility to organize the “watches” on the ship which allowed for the safe sailing of the vessel during the night. While other officers were hired for an individual voyage of the galleon, the master usually remained with the vessel throughout its years of service.

In some cases in Spain, the master was also a partner in the ownership of a vessel on which he sailed and worked, or he may have been hired to represent the owners of the ship. In the case of the Manila-Acapulco galleons, the vessels were owned by the government. As a result, it was his responsibility to hire the crew for the vessel, and he often found mariners such as a boatswain he had worked with in the past, to join in organizing a crew for an upcoming voyage. In Spain, when the master was planning to sail a vessel on a voyage, he first had to apply for a license from the House of Trade. In order to obtain the license, he was required to adhere to the ordinances passed by the House of Trade.

Consequently, he was required to provide an accurate account of the merchandise, bullion and coinage he carried in his ship. Moreover, he had to pay a number of security deposits to the House of Trade for an individual voyage and provide character witnesses who were able to vouch for his reputation and credentials. It was necessary to pay security deposits as it was not uncommon for a master to abscond with the vessel, and its cargo, leaving the consignees of the merchandise and owner of the ship with great losses. Even though he was in charge of every aspect of organizing and managing the vessel, he was in a position to earn a larger income than some of the other officers including the chief pilot. If he was an honest master, he made do with his salary, but if he was unscrupulous, he could resort to defrauding the consignees of the cargo by adding false information onto the ship’s register for his own benefit and profit.

These payments included a security deposit of 10,000 ducados of silver ensuring that he would observe all the rules and regulations of the House of Trade. The deposit was held by the House of Trade in case there was any loss of merchandise, bullion or coinage on the ship. He also had to pay additional security payments to ensure that the ship was ready for loading on the date assigned; that no passengers were taken on board without having a proper license to board the vessel; that all of the accounts and contracts with the consignees shipping cargo on the vessel were completed within a four month period after their contracts had been signed, and that the ship was prohibited from making any stops during the journey which had not been agreed to by the House of Trade. The ship’s master could also be fined for not meeting all of these requirements when officials from the House of Trade inspected the vessel. In addition to all of the security

payments to the House of Trade for an individual ship and one voyage, the ship's master also had to make payments to officials in the ports he came to during the journey. As the security deposits were meant as insurance payments, he received the entire amount at the end of the voyage from the House of Trade.

While he still reported to the captain in Manila, he had a number of duties to perform during the preparatory stages of fitting out the galleon for a voyage. These included the purchasing and supplying of the vessel with the provisions, equipment and supplies required for the voyage, as well as ensuring that the vessel carried weaponry and ammunition. To supply the vessel, he established a business relationship with merchants in Manila, as well as finding tradesmen in Mexico who were interested in shipping cargo on the galleons to the Philippines. As such, he acted on their behalf in all transactions concerning the cargo. When cargo was loaded and stowed onto the galleon, he was on hand to supervise the entire process, as well as ensuring that the cargo was properly documented in the ship's register. Moreover, he received the freight charges imposed on the cargo from the consignees who were shipping merchandise on the vessel. He acted on behalf of the consignees when the ship arrived in Acapulco paying the customs duties and taxes imposed on the cargo. He was in charge of making sure that the cargo was received in Mexico by the purchasers there. It was also his responsibility to make certain that the passengers aboard the vessel were safely transported to their destination and that the cargo remained undamaged throughout the voyage.

He had to ascertain that the ship was properly maintained from its rigging, to sails, pumps and rudder. Should the vessel require repairs or careening, he made sure that the appropriate supplies and equipment were stowed on the ship and readily available. The materials needed for the repairs and careening included extra sailcloth, timber, ropes, cables and caulking supplies. Other administrative duties he attended to included paying a salary to the pilot and providing the sailors with an advance on their wages. As the masters' duties became ever increasingly administrative during the seventeenth century, he turned over many of his responsibilities to the first naval lieutenant and the boatswain. This left him with a greater amount of time to devote to properly attending to other matters concerning the management of the galleon.

The Chief Pilot (Piloto Mayor)

The third most important officer on the galleon was the chief pilot. According to the regulations of the House of Trade to control the vessels, all Manila-Acapulco galleons had to carry three pilots - one chief pilot (primer piloto) and two assistant pilots (segundo and tercer

pilotos). The chief pilot's position on the vessel was on a par with that of the captain and the ship's master. As an experienced navigator, he was responsible for charting a course for the galleon and ensuring that the ship reached its destination. As extensively discussed in the chapter on navigation (Chapter 11), he was expected to be an educated and well-rounded individual. He also had to know mathematics, as he had to determine navigational calculations using the instruments then available in the sixteenth and seventeenth centuries for this purpose. He would have been familiar with the use of the compass and the astrolabe and able to proficiently read sea charts and maps, as well as charting a course for any type of sea vessel. His instructions during the voyage determined how the sails were raised or lowered depending on the winds and sea currents.

By September 1534, only a native born Spaniard could be certified as a chief pilot or a ship's master. They were both required to pass the House of Trade's nautical examinations, before they could be assigned to a particular vessel. If a chief pilot was in the possession of a certification from the House of Trade, he was experienced enough to perform the duties of a ship's master if necessary especially if he had a financial interest in the vessel.

In the Atlantic fleets, from the sixteenth to the mid-seventeenth century, a chief pilot was assigned to oversee an entire convoy. He was appointed to that position by the captain general of the fleet with the king's consent. The king would have been informed of the candidate's eligibility by the Council of the Indies and the Council of War in Spain. The individual selected had to be beyond reproach and highly experienced as a pilot. On the other hand, the pilots of the individual vessels in the convoy were selected by the chief pilot in consultation with the captain general of the fleet. They made their selections from a list of candidates who applied for the position. The list was supplied to them by the House of Trade.

During a voyage, it was the responsibility of the chief pilot to confer with the pilots of the individual warships and merchant vessels who reported to him during the voyage. He determined the course the ships would sail and passed this information on to the other pilots. The pilots were originally sailors who eventually became pilots if they had a rudimentary education. With time and experience, and having a certificate from the House of Trade in Seville, they rose in rank attaining the prestigious position of pilots on a sea vessel. However, the fact that so many navigation books were produced in the sixteenth century, describing how to navigate a vessel, serves as an indication that not all pilots understood what was expected of them.

In comparison to the Atlantic fleets, as the Manila-Acapulco galleon traveled on its own, there was usually the requisite chief pilot and two

assistant pilots on board. The chief pilot set a course for the galleon from Manila to Acapulco and vice versa instructing the helmsman in the direction he was to move the vessel. The chief pilot was expected to know about the changes in weather patterns, winds and currents, which could affect the ship's navigation. He also needed to know how the sails had to be adjusted during a voyage to move the ship forward and regulate its speed. He ensured that the ship's night watches were adhered to without fail and kept his assistants busy as they reported any changes in the weather or sea currents and made calculations using the navigational instruments.

In the capital of Manila, the pilots were considered high-ranking government employees who were respected and admired. They were indispensible when it came to navigating a vessel and for this reason their salaries increased throughout the sixteenth and seventeenth centuries.

At times in Spain, it was difficult finding qualified pilots for the Spanish ships. Even though the government had ruled that it was against their regulations to hire foreigners as officers of their sea vessels, the king requested a list of qualified foreign pilots. The Spanish government had no choice but to allow foreign pilots to serve on their vessels and they were employed for this purpose. The lack of qualified Spanish pilots was also a problem in Manila. As a result, foreigners from France, Germany and Ireland were hired to serve as pilots on the Manila-Acapulco galleons. In 1753, both a Frenchman and an Irishman were hired as pilots for a Manila galleon. In fact, another Frenchman, Antoine Limarie Boucourt, piloted the *Nuestra Senora de la Santisima Trinidad* galleon during her voyage to Acapulco in 1755.

Le Gentil also wrote in the eighteenth century of a fellow Frenchman, Fraslin, who was a pilot for the Spaniards in Manila. He said of him, "This man has been very useful in navigation and all the Spaniards have spoken of him in the highest terms. His last voyage cost him his life. The (captain) general, a brusque man, who disliked him, demoted him en route and put him in second place. He took the affront so hard that he died of it. That was in 1766 and his loss is still being mourned."[121]

Reporting to the galleon's chief pilot was the helmsman. On the Spanish vessels the ship was moved using a whip staff, which was connected to the tiller and the rudder by ropes. The ship was moved forward by the helmsman who moved the whip staff either to the right or to the left. This system was not replaced until the latter years of the eighteenth century by a wheel which was also connected by ropes or chains to a tiller and the rudder. The helmsman's post on the ship was just in front of the whip staff and below the bridge and

within hearing distance of the chief pilot's orders. Standing just in front of the helmsman's position was the ship's compass which was secured in an enclosed glass and wood cabinet or binnacle (bitacora).

The Boatswain (Segundo Contramaestre), Steward (Guardian Primero), Dispenser of Provisions (Despensero) and the Water Bailiff (Alquacil de Agua)

After the captain, ship's master and the chief pilot, the boatswain (segundo contramaestre), was the fourth naval officer in command of the galleon. As an educated and experienced mariner, he served as a direct assistant to the ship's master taking over duties assigned to him by the master. For this reason, he was expected to be able to read and write. He was involved in the mooring of the vessel, the loading and unloading of cargo at the ports and its safe stowage on the vessel, as well as recording everything brought onto the ship.

He was primarily involved in issuing orders to the crew regarding the maintenance and operation of the ship's masts, rigging, yards and sails during the voyage. If there were any repairs or careening to be made, he gave orders for both activities to take place ensuring that they were properly carried out by the crew. He conducted a daily inspection of all of the various components involved in the operation of the ship.

It was also his duty to make sure that sufficient supplies and equipment had been loaded onto the ship for the voyage. These included extra ropes, cables, sails, lumber and caulking materials. One of his main concerns was ensuring that the cables used for the anchors and the ropes for the rigging remained in good condition, as they were frequently worn away by erosion at sea or by gnawing rodents. When the ship was at sea, the boatswain could be found standing by the mainmast with his characteristic whistle, which was used to salute the commanders of other vessels in a fleet, as well as to cue the crew members as to the various jobs they had to perform. From his post by the mainmast, he was able to hear the orders of the ship's master and the chief pilot, who were both standing on the bridge, which he in turn passed on to the crew.

Another officer, the steward (guardian primero), assisted the boatswain in his duties. He was in charge of the ship's cleanliness and safety. It was his job to ensure that the ship was kept in as clean a state as was possible. Washing (swabbing) the main deck every day was necessary in order to keep the wood moist and prevent it from drying out and cracking, which would have entailed making endless repairs to the planks. With regard to safety issues on the ship, this entailed the supervision of any fires which were lit in the galley. The steward had to make sure that the cooking fires were properly controlled and extinguished at the end of the day, as the outbreak of a

fire was one of the primary dangers to a vessel during a voyage. The steward also monitored the use of candles and lanterns on the ship by the officers, crew and passengers. He was also instrumental in maintaining discipline aboard the vessel, supervising and keeping a watchful eye on the spirited apprentices and pages who were the most likely to get into scuffles with each other.

The steward took up his position at the ship's prow. From there, he was able to take orders relayed to him by the boatswain, which he, in turn, conveyed to the crew. One of his other duties was to command the ship's small boat whenever it was sent on a particular mission. The boat was carried on the ship's main deck and was lowered into the water when needed. Once there, the steward and oarsmen boarded her and then carried out their orders whether it was to assist in loading the galleon with cargo or for use in taking depth soundings in waters the ship traveled through.

The food dispenser (despensero) assisted the boatswain. His primary function was to guard and preserve the ship's provisions of food and wine and distribute daily food rations to the crew. He characteristically carried a set of keys to the main food store areas on the vessel. It was necessary to guard the provisions and maintain a vigilant and watchful eye on the food stores as they were often the source of many disputes amongst the crew members. It was not uncommon to find that the crew was frequently disgruntled when receiving their rations because of the meager portions they received or due to the fact that the foods they ate were already highly unpalatable.

He was expected to be a formidable figure and able to mete out punishments to those individuals who stole food on the ship. It was also his responsibility of provisioning the ship with fresh foods whenever the ship stopped in a port for this purpose. He arranged for the storage of the provisions on the ship. As he was in charge of the vessel's provisions, he was in a position of benefiting financially from this. He purchased the provisions from food vendors who usually provided him with a commission in return. He also received a sum of money from crew members who paid for an extra portion of foods. The water bailiff (alquacil de agua) was considered a special official on the galleon. He reported to the boatswain and was in charge of dispensing water to crew and passengers on the vessel.

The Accountant (Contador) and the Overseer (Veedor)

The accountant (contador) and the overseer (veedor) were both crew members of the galleon. When the galleon was loaded with cargo at Cavite, they were involved in this activity and supervised where it was stowed in the vessel. One of their duties was to guard the ship's register and ensure that no undocumented merchandise was loaded

onto the galleon or added to the register after it was closed. To the chagrin of the galleons' officers and merchants in Manila, who were interested in adding additional cargo to the ship for extra profits, the accountant and overseer were often viewed as nuisances.

The men chosen for these two central positions were expected to be beyond reproach, honest and trustworthy. As the Spanish government depended on receiving its taxes and customs duties on all cargo entering their ports, one of their main jobs was to certify that illegal goods were not smuggled onto the vessel and thereby avoid paying the monies owed to the Royal Treasury. As they were clearly very important members of the ship, they each received a large salary of 2,000 pesos. But the generous salary was the government's attempt to prevent them from becoming corrupt and assisting smugglers who were interested in carrying illicit cargo on the vessel.

In Spain, the overseer was known as an inspector. His main duty was to serve as the king's financial representative in the fleet. The fleets also carried a paymaster (pagador) and a purveyor (proveedor). In the Spanish fleets, the paymaster paid the crew their salaries while the purveyor supplied the vessels with provisions, equipment and crew members. In the case of the Manila-Acapulco galleons, the ship's master was in charge of paying out the salaries to the chief pilot and the crew members, although the officers including the captain received a salary from the Manila government. The job of the purveyor or supplier was carried out by the ship's master in Manila, with the assistance of the boatswain, as he was in charge of buying everything required for the galleon.

The Master of Silver (Maestre de Plata)

The House of Trade in Seville appointed a master of silver (maestre de plata), to sail on the capitana, the flagship for the Atlantic fleet to and from the Caribbean. His job basically entailed the registering and ensuring that all appropriate taxes were paid for the royal and privately held silver and other precious metals loaded onto the vessels in the fleet. He traveled with an entourage of assistants who were assigned to travel on the other vessels in the fleet, where they safeguarded the privately held precious metals they carried from the Caribbean to Spain.

As the greater proportion of the silver and gold carried on the flagship was destined for the royal treasury in Spain, and provided the king with a share of the precious cargo, it was necessary to install a master of silver on the ships to safeguard the transportation of what was referred to as "treasure." The paymaster, who was assigned to the fleet, was also involved in ensuring that the privately held shipments of silver and gold had been documented in the ship's register and that any taxes imposed on the treasure had been paid by the owners.

On the returning galleon from Acapulco to Manila, there was always a master of silver assigned to the vessel by the viceroy's office in Mexico City. It was his job to safeguard the silver payment for goods shipped to Acapulco the previous year, as well as the silver subsidy sent by the Mexican government to Manila for its governmental expenses. According to Zuniga, the master of silver was in a position to earn extra funds through the galleon trade run. "The plate master of the galleon receives half a peso for every 100 pieces (of silver) put under his care and the position as well as those of the account, pilots, captain, lieutenants, and non-commissioned military officers of the galleon (which are all named by the governor) are all very lucrative. In addition to saving 1,500 pesos for their transportation, they enjoy a salary, receive commissions, and engage in trade and in their trunks they never forget to put something by stealth so that their earnings will total no less than 4,000 pesos or 5,000 pesos aside from what they get by engaging in business." [122]

Le Gentil mentioned in the mid-eighteenth century that the master of silver paid 3,000 pesos for the appointment. He also stated that the master of silver had little to do during the return journey from Manila to Acapulco.

The Notary (Escrivano)

The notary (escrivano) had a number of duties to perform on the vessel. He served as a legal witness to the gathering and signing of all documents concerning transactions related to the ship. This ensured that the documents were legally binding and properly executed. He kept a record of all of the transactions he was asked to notarize. One of his other duties was to maintain a record of all cargo, equipment and supplies loaded onto the vessel and whether any of the cargo sustained damage during the journey. He had to provide an explanation of how the damage occurred, as this was necessary as the cargo was insured and any claims made to the insurers, required a precise description of how the damages took place.

The notary witnessed the movement of provisions on the vessel and the distribution of daily food rations to the crew members - ensuring that each individual received his fair share of food and drink. In Spain, regulations for the vessels called for the notary, the cooper and a captain's envoy to witness the opening of every barrel of wine and vinegar. In the Philippines, notaries were also hired by the government to provide the same services on the galleons.

The Master Carpenter (Maestro Carpintero), Caulker (Maestro Calafate), Sail Master (Velero), Diver (Buso), Blacksmith (Herrero) and Rope Maker (Cordelero)

It was customary for galleons in Spain, the Americas and in the

Philippines, to have in their employment a number of skilled individuals who provided a host of services on the vessel. They included the master carpenters (maestro carpinteros), master caulkers (maestro calafates), sail master (velero), diver (buso), blacksmith (herrero) and the rope maker (cordelero). They were all involved in the maintenance and repair of the vessel and collectively were referred to as the "maestranza," which meant a group of workshops. Additionally, a cooper or barrel maker would have been included in this team of repairmen, but in the Philippines, as mostly Asian jars were used to transport provisions and liquids, a cooper was not always required on the galleons.

It was necessary to have these individuals aboard the ship in order to continuously maintain and make repairs to the galleon when required during a voyage, but they were also involved in careening the vessel on land. Consequently, this was also the case in the Manila-Acapulco galleons in the Philippines. The master carpenter and his assistants repaired the hull, masts and planks. If any wooden components were required on the vessel, he had to produce them using his carpentry skills, supplies and tools. There would have been hundreds of wooden pulleys used for the rigging and if these were damaged - new ones had to be provided by the carpenters. If a portion of a mast was damaged at sea, the carpenters built another one. If additional cabins and partitions were needed for the accommodations of the officers and passengers, it was up to the carpenters to quickly set these up. Although the galleon usually carried a smaller boat on its main deck, if another was needed, the carpenters built one with the extra wood they had brought onto the galleon as part of its supplies.

Similarly, the caulkers attended to the maintenance of the hull making sure that it remained waterproof. They had to fill in the spaces between the planks of the hull and the decks with caulking materials to ensure that water did not leak into the ship. A caulker was also required to prepare the caulking materials needed for the filling. If the caulking materials eroded or needed to be replaced the caulker was in charge of handling these jobs. He was also in charge of reporting to the captain, master and the pilot, on the state of the ship and the condition of the bilge pumps used to remove excess water from below the hold.

The diver was often involved in assisting the carpenters and caulkers in repairing the ship below the water line by diving underneath the vessel, to conduct an underwater inspection. If a breach in the ship's hull proved difficult to repair from inside the vessel, it was often up to the diver to repair it from outside the ship. The diver was also employed in removing barnacles and other debris which may have settled on the ship's rudder, thus affecting the

helmsman's ability to maneuver the ship. Inside the vessel, he conducted inspections to ensure that the caulking materials between the planks remained intact or repaired them where necessary.

During battles, the repairmen all stayed below decks making repairs as needed to ensure that the ship remained waterproof. After a battle, the diver dove into the sea and checked the hull for damage and made whatever repairs were required. The ship most likely had on board one or two blacksmiths, as well as rope makers. The blacksmiths provided their skilled work when on shore careening or repairing the vessel, as well as other jobs. The rope makers mended ropes re-using old fibers from worn ropes.

Surgeon (Cirujano) and Chaplain (Capellan)

The role of the ship's surgeon (cirujano) evolved from men who were originally barbers or apothecaries in Spain. By the sixteenth century, Spanish vessels were already carrying surgeons to attend to the wounds of injured crew members and passengers. The surgeon was usually equipped with a number of medicines and cloth to make bandages and dressings, as well as saws for the amputation of limbs. Other tools would have included scissors, clamps, and various types of knives, cauterizing implements, needles, hammers and picks. The surgeon often had to prepare medications of powders and ointments while on the vessel and for this he needed spoons, spatulas, funnels, a mortar and pestle, scales and a small brazier to heat his preparations.

From artifacts recovered at the *San Diego* galleon excavation site, it was obvious that these types of items were used for medicinal purposes and most probably by the ship's surgeon. The artifacts included a bronze mortar, small ceramic pots for medicines, lead weights used to measure the ingredients in the remedies produced by the surgeon and larger jars which would have contained medicinal liquids or powders.

In Spain, the captain general of the Atlantic fleet appointed a chaplain (capellan) to serve on the ships in the convoy. In the Philippines, there was also a chaplain appointed to the vessel, but as there were usually many members of various religious orders on the ship, they could participate and hold religious services on the ship. They conducted daily masses and prayers and assisted the surgeon - offering prayers for the sick, injured or dying crew members and passengers, as well as officiating at the ceremony when a death occurred during the voyage.

Cook (Cosinero) and the Trumpeter (Trompeta)

We can assume that each vessel had a primary cook (cosinero) on board the galleons. He was under the supervision of the food dispenser. When he prepared meals for the crew, he was assisted by

cabin boys, who were also involved in serving the meals. It was not expected that each person would have prepared his own meals, as the galley fire was strictly supervised and guarded by a soldier. The officers and passengers also availed themselves of the services of the chief cook who could prepare their meals using their own personal provisions they had taken aboard the vessel.

The cooking area of the ship was usually one of the most protected and secured parts of the galleon to ensure that the fire used to prepare meals was contained and controlled for the safety of the vessel. Although its design may have differed somewhat from one ship to the other, one type of cooking area was probably the most secure. In this case, the area of the cooking fire was contained in a brick lined pit where the firewood burned. The pit was just above the ballast of the ship and in an enclosed part of the hold. Above this, on the lower deck, the cook was stationed with the provisions and kitchen utensils. Kettles and other pots were lowered into the pit to prepare the food.

Another example of a cooking pit is the type used on the Atlantic fleet vessel the *Nuestra Senora de la Atocha* in 1622. The warship galleon had its cooking pit, not above the ballast in the ship's hold, but on the lower deck at the fore of the vessel. The cook's station was just above the cooking pit on the gun deck.

On Spanish warship galleons, there was usually a sailor who was known as the ship's trumpeter (trompeta). Originally, the warships carried as many as six trumpeters on each vessel, but eventually this was changed to just one. The trumpeter's services came to the fore whenever the ship was engaged in a battle. He played the trumpet to fortify and energize the crew members in battle, as well as frightening enemy combatants. When the ship was not involved in a battle, the trumpeter played his instrument in the morning and afternoons and during festive occasions. At those times, he contributed musical selections as part of an enjoyable respite for those aboard the vessel.

The Sailors (Marineros), Apprentices (Grumetes) and Pages (Pajes)

The Manila-Acapulco galleon carried approximately 130 sailors. Although the majority of the officers and skilled sailors working on the galleons were Spaniards or Mexicans, the remaining crew, were mostly Filipinos. There were, of course, other Asians involved in the construction and manning of the ships such as the Chinese, but on the whole it was Filipinos who provided their services on the vessels as sailors, apprentices and cabin boys. The apprentices were young men who were being trained on the ship to become sailors, while the cabin boys were recruited to run errands on the vessel and assisted wherever they were needed.

The ratio of Filipinos to Spaniards on the ship was usually five

Filipinos to one Spaniard. In most cases, the Filipinos were recruited to work on the galleons whether they wanted to or not. Under the Spanish laws of the time, the government had the right to remove Filipinos from their homes. They were put to work in the shipyards or they served on the galleons as crew members. They were often provided with a small salary, but they received only half the amount paid to Spaniards who were involved in comparable positions.

Many of the Filipinos who served on the vessels were recruited from coastal areas of the country. It was not unusual for some of them to flee to other parts of Luzon, for example, in order to avoid the government officials who were in charge of recruiting Filipinos for the shipyards and galleons. The Filipinos, from the agricultural areas, were basically farmers and knew almost nothing of nautical matters, so they were fearful of working on the ships. Consequently, many of the Filipinos who were recruited were unfit to work on the galleons and often perished during the journey to Acapulco. As the ship sailed northward, from the San Bernardino Strait towards Japan, the crew began to feel the effects in the changing temperatures. The Filipinos, unaccustomed to colder weather, easily became sick with pneumonia and died.

It is interesting to note, that at one point during the voyage of the *San Jose* galleon in 1696 to Acapulco, Gemelli Careri said that the captain ordered the distribution of warm clothing to the crew. Apparently a Spanish law was passed in 1620, whereby the Spaniards were ordered to be kinder to the Filipinos - providing them with sufficient clothing and food during the journey. The Filipinos who worked on the galleons were mistreated by the Spaniards and the Mexican crew members. They also became sick during the journey as they were given half the rations provided to the Spaniards. No doubt, this led to their debilitated state and an inability to resist colds.

In the Philippines, it was becoming increasingly difficult to find an endless supply of Filipinos to work on the galleons or at the shipyards. Captain Sebastian de Pineda wrote in 1619, of the loss of many Filipino workers, due to a variety of causes. He said, “I regard the present building of ships in that country (the Philippines) as impossible. For with the former ships and fleets, and with the depredations and deaths caused by the enemy in those districts the natives are quite exhausted; for, as I said above, in the former year 1617, the Mindanao enemy captured 400 native carpenters and killed more than 200 others. The year before that, 1616, in the expedition made by Don Juan de Silva to the strait of Cinapura (Singapore), where he died, it was found from lists that more than 700 Indians (Filipinos), of those taken as common seamen of whom more than 200 were carpenters, died on that expedition. Before that, in the year

1614, the said Mindanao enemy captured, in the islands of Pintados (Visayas), 900 odd Indians, of whom but few have been ransomed. In the shipbuilding and in the hauling of wood many have died. Consequently, on account of all combined, there is a lack of natives for the above works. Therefore your Majesty must order the said Don Alonso Fajardo, governor and captain general of the islands, that in case galleons are to be built, it should not be in the islands – on the one hand, on account of the short time that those woods last, and on the other because of the lack of natives - occurring through the above mentioned causes, and because those natives in the islands are serving in the fleets as common seamen and carpenters. "[123]

On the other hand, those individuals from the coastal regions who were familiar with a nautical lifestyle were better able to adapt to shipboard life and work. According to Francisco Leandro de Viana, Filipinos were naturally inclined mariners. He said that, "There is not an Indian (Filipino) in these islands who has not a remarkable inclination for the sea; nor is there at present in all the world a people more agile in maneuvers on shipboard, or who learn so quickly nautical terms and whatever a good mariner ought to know."[124]

In addition to the Filipino sailors, the galleon also carried a smaller number of Chinese and Japanese crew members. They were hired as sailors, apprentices and soldiers, but like the Filipinos, the Chinese would have been employed as laborers and skilled workers such as carpenters, caulkers, sail menders and blacksmiths. As the Chinese of Manila have been extensively discussed in Chapter 4, suffice it to say that historical accounts indicate that the Chinese were working in the Cavite shipyard as employees involved in the construction, repair and careening of sea vessels. They were also employed as packers of the many goods, provisions, supplies and equipment loaded onto the galleon and in the stowing of these items into the hold of the vessel.

The Japanese were employed on galleons as mercenaries. They were especially used for this purpose within the country, during conflicts with the Muslims of Mindanao and the Chinese, who rebelled against the colonial government. The *San Diego* galleon carried a number of Japanese mercenaries in December 1600, when it was involved in a conflict with Dutch enemy vessels in Manila Bay.

The apprentices were basically young sailors who were undergoing training in order to become more experienced crew members. As the apprentices were usually much younger than the experienced sailors, they assisted by helping to load provisions, supplies, equipment and cargo onto the ship. They carried out a number of jobs on the vessel which took advantage of their youth and dexterity. When the ship's boat was lowered, they were recruited as oarsmen. They served as lookouts on the masts and helped to unfurl the sails when ordered to

do so. They took their orders from the officers and the experienced sailors, and at times turned into the personal servants of those individuals. It was not unusual for apprentices to serve meals and make the beds for older members of the crew. In return, they were protected and safeguarded by the older men, who provided them with a sense of security on a ship where many of the men were rough individuals and often quarrelsome.

It was often the apprentices who received the brunt of a sailors' angry outburst. As Perez-Mallaina described their plight, he wrote that, "The apprentices' role was to serve as an outlet for the frustration of many members of the crew. They were used as veritable punching bags in many instances, receiving the majority of whacks administered on a ship. Naturally that mission was totally involuntary on the part of the long suffering apprentices, who had to put up with more than the lash of a whip wielded by an officer or a sailor exasperated by their slowness in following an order. "[125]

While the apprentices were learning to be sailors, the pages or cabin boys were given all the menial jobs on the ship. In Spain, they were usually orphans, runaways or abandoned children and ranged in age from twelve to sixteen years old. They could be found roaming the streets of Seville and Cadiz and, in some cases, officers brought them onto the ship to serve as their personal servants. The boys also came from the homes of friends or other individuals, who found jobs for them on the sea vessels.

The recruitment of pages in the Philippines, most probably was conducted in a similar fashion as in Spain. In some cases, young boys were found in the streets of Manila and in its surrounding areas to fulfill these jobs. But it was more likely that the boys were recruited similarly to the recruitment of adult Filipino men, who worked as farmers and seafarers, and were compelled to work at the shipyards or on the galleons with little choice in the matter. This would have meant that they were removed from their homes and their families. In a country where family ties are so important, it seems unlikely that families would have so willingly turned over their young children to the Spaniards as pages, unless they were forced to do so.

Their duties consisted of various types of work on the ship. They ran errands for the officers and sailors who treated them like servants. Other young pages were in charge of turning the sand clocks (hour glass), washing the decks twice a day or assisting the cook in the preparation and serving of meals. They recited out loud passages from religious books while the crew members worked. It was thought at the time, that as the pages were young and innocent, their prayers would most likely be heard in heaven and could help to keep the ship safe from danger.

Master Gunner (Condestable Primero) and Gunners (Artilleros)

The master gunner (condestable primero) was in charge of the guns/cannons on the ship and the men who operated the weapons. The master gunner worked with the ship's master, especially if the vessel came under attack, and there was a need to coordinate a defense of the ship with everyone on board participating in the conflict. Along with the ship's master, he supervised the loading of guns onto the vessel and where they were placed inside the ship. It was also his responsibility to ensure that the vessel carried sufficient supplies of ammunition and equipment related to the operation of the guns. The men involved in operating the guns the "artilleros," received their orders from the master gunner. They had to know how to operate the guns which were specially assigned to them. They were required to keep them clean and prepare them for loading and firing. As all of these actions had to be rapidly handled during a battle, the men involved in firing the guns had to operate in unison as a team. Each person was expected to know exactly what he was supposed to be doing and carry out his duties quickly and proficiently.

"A good gunner needed to master many different skills. He had to know how to make and refine gunpowder, fill grenades, select various types of projectiles for use against the hull, the masts and rigging, enemy crews and so on. He had to load the cannon with the exact measure of powder, take aim, maintain the gun in a serviceable condition and free from the deterioration it could suffer through inclement weather and saltpeter, and finally secure the cannon to keep it from moving at sea and know how to maneuver it quickly for reloading during battle."[126]

The gunners began their careers as sailors and gradually moved into the more skilled positions of gun handlers. As they gained experience, they were known as "lombarderos." It was not unusual to find that in Spain, many of the gunners were foreigners, even though the government continuously attempted to minimize their numbers in the fleets. The government, nevertheless, had no choice but to look outside of the peninsula for crew members as it was becoming difficult recruiting experienced seamen in Spain for jobs such as pilots and gunners. As a result, they resorted to hiring experienced gunners from Italy, Germany and Flemings (Belgium).

The House of Trade offered courses and an examination for gunners who were interested in finding a position as a master gunner on one of the Atlantic fleet vessels. A chief gunner was hired by the House of Trade to instruct the gunners. The courses were held at a practice range, located outside of Seville, where cannons could be used by the students. The price for the courses and the examination was expensive as each candidate had to pay for his own ammunition and gunpowder.

The candidate also had to pay a fee to the chief gunner for his services as the instructor.

During the voyage, the gunners participated in the night watches, and one of the gunners who was experienced in steering the vessel, took over the helmsman's job at night. As a precaution during the night, and in case of a possible attack at sea, the gunners slept in the open on the main deck. When required, they performed the nighttime duties of the sailors - helping out with the rigging and sails. If the ship came under attack, it was the normal practice for all the crew members to assist in fighting the enemy. The master gunner shouted out instructions to his own men and the soldiers and sailors assigned to him during the battle.

In the Philippines, it was most likely that the chief gunner was a Spaniard and that the majority of the gunners under his supervision were either Spaniards or Mexicans. But Filipinos were probably trained to work with the gunners and weapons they were assigned to handle on the galleon.

The Soldiers (Soldados)

Throughout the period of colonial occupation of the Philippines, Filipinos were continuously recruited to work for the Spaniards as soldiers. They were hired to man the numerous military fortifications in the country, as well as to fight in battles alongside the Spaniards against the Muslims of Mindanao, pirates in the Visayas, and the Chinese of Manila whenever they rebelled against the government. In addition to aiding the Spaniards in their battles on land, the Filipinos served as sailors and soldiers on the galleons and would have been supervised by Spanish and Mexican officers. An individual galleon generally carried approximately 50 soldiers, plus military officers. The soldiers would have been trained to handle hand weapons such as harquebusiers, muskets, pikes, swords and knives.

From archival information about the history of the Philippines, there is evidence that the Japanese mercenary samurai, who were living in Manila as Christian refugees in the sixteenth and seventeenth centuries, were also hired by the Spaniards to work on the galleons as soldiers. Evidence for this fact was also confirmed through the archaeological remains found at the *San Diego* galleon site of Japanese weapons.

Infantry regiments sailing on the Atlantic warship galleons came under the jurisdiction of an officer known as the infantry governor or "gobernador." He, in turn, reported to the captain general and the admiral of the fleet. All of the officers with their individual detachments of infantry soldiers on the vessels reported to the infantry governor. The ship, upon which the infantry governor sailed, was known as the "gobierno."

As indicated earlier, on the individual vessels, the captain was either a "captain of the sea" with extensive naval experience or a "captain of war," an individual with military training and experienced in battles on land. Only the "captain general of the entire fleet," was expected to be knowledgeable in both areas serving as the "captain general of the sea and of war." If the captain of an individual galleon was a captain of war, during battles, he commanded the soldiers aboard the vessel. In this case, the ship's master, as usual, and the chief pilot, continued to operate the ship. If the ship was commanded by a captain of the sea, then the infantry would have had its own infantry officers on board the vessel to command the soldiers in their guard duties on the ship, as well as during battles with enemy vessels.

There were several officers who reported to the captain of war and they included an infantry lieutenant (alferez de infanteria), who was second in command of the infantry. The duties of the infantry lieutenant included finding accommodations for the soldiers on the galleon, as well as supervising them during the day. Another officer reporting to the captain of war was the sergeant (sargento). The sergeant accompanied the ship's master when the vessel was loaded at the port, to ensure that all of the supplies and equipment the soldiers needed had been taken aboard the vessel. He also was responsible for the wellbeing of the soldiers, making sure that each received his daily ration of food, as well as caring for them when they became ill. When a soldier was dying, if time was available, he helped them to write out a will, and asked the priests to provide the last rites to the individual. He was in charge of selling all of the dead man's possessions with the approval of the captain. The proceeds from the sale were turned over to the family of the deceased.

The sergeant was responsible for the placement of guards on the ship. He assigned one soldier to guard the captain's quarters, another to guard the cooking fire, and others along the main and upper decks. The soldiers participated in the night watch. It was up to the sergeant to organize the soldiers who participated in this activity. Also reporting to the sergeant was the fife player (pifano) and the drummers (tambores). If the ship was engaged in battle, with an enemy vessel, the fife player and the drummers played their instruments to encourage the soldiers in battle. They also played the instruments during the changing of the guards and for special occasions, such as an entertainment evening of music on the ship. The sergeant could usually be found stationed at the ship's main mast from which he could order his soldiers, as well as observe if enemy ships were in the area.

If there were squadrons of soldiers on the ship, especially on the galleon from Acapulco to Manila, which normally carried troops

serving as reinforcements for the garrisons in the Philippines, each of these was supervised by a squadron leader or corporal that reported to the sergeant. He was known as a "corporal of the squadron" or "cabo de escuadra." Each squadron was usually composed of about twenty-five Spanish and Mexican experienced soldiers, musketeers and harquebusiers. The squadron leader had a number of duties to perform including ensuring that the soldiers' weapons were cleaned and maintained, and that they carried out their guard duties as ordered.

Salaries of the Officers and Crew

As the Pacific galleons were owned by the Spanish government, it was their responsibility to pay the salaries of the officers and crew members who were hired to work on the vessels. The government's royal fund provided the financing for the salaries. Funds were also provided for the provisions, supplies and equipment which were loaded onto the galleons. The wages paid to the officers and crew fluctuated throughout the centuries the galleon trade run was in operation, but the salaries the officers and crew members received, provides a glimpse into how the individuals who sailed these vessels were compensated for their work.

The captain had the capacity to earn as much as 50,000 to 100,000 pesos during a voyage from Manila to Acapulco. The position of captain on the vessel was a highly sought after appointment. The candidate paid the governor about 10,000 pesos for the job. In general, the captain's salary ranged from 4,000 to 10,000 pesos per voyage, but he could add to his earnings by carrying cargo on the vessel for merchants in Manila, while claiming that it was his own freight. He received a commission from the merchants for this service. Even though the law permitted him to carry cargo on the ship the other officers were not afforded this privilege. But despite this fact, they also managed to take merchandise onto the ship, which was listed as personal possessions and destined for the Acapulco marketplace. They carried the merchandise for Spaniards in Manila and earned a commission in the process. They knew that the Acapulco customs officials would not tax any personal possessions and in this way got away with the deception.

The captain and the officers earned substantial amounts in commissions. Gemelli Careri described the commissions they received in the seventeenth century. He said that the commander of the *San Jose*, Captain Emmanuel Arguelles, mentioned that he expected to receive commissions amounting to 25,000 to 30,000 pesos. Meanwhile, the ship's master expected to receive 9,000 pesos in commissions and the chief pilot 20,000 pesos.

The experienced Spanish sailors, who handled the rigging and sails and repaired the ship, received a higher salary than the Filipino and

other Asian sailors. According to Careri, these skilled workers received a salary of 75 to 350 pesos depending upon the type of work they performed on the ship. Common sailors received a salary of 75 pesos, while Filipinos were paid 48 to 60 pesos. Unlike the officers who received their salaries up front, the common sailors received 75 pesos at Cavite before the ship departed, and on the return journey when they arrived in Manila, they were paid the balance of their salary of 275 pesos. The Spanish government handled the salaries in this manner to ensure that there would be a crew in Acapulco to man the returning galleon. Whenever there was a shortage of crew members in Acapulco, government officials sent press gangs to Mexico City to round up beggars and vagrants to serve on the ship.

One of the problems the Spanish government encountered in Acapulco was the fact that Filipino crew members opted to stay in Mexico when they arrived at the port. They felt that in Mexico, there were better opportunities for them to have a prosperous life. For example, when the galleon the *Espiritu Santo* arrived in Acapulco in 1618, seventy-five of the Filipino crew members abandoned the ship and stayed in Mexico. They were enticed to stay there by native Mexicans who were willing to pay them a higher salary, as they were interested in learning how Filipinos were able to produce coconut palm wine known as "tuba."

The Filipinos were all too aware of the fact that the Spanish government often delayed or refused to pay them their salaries when they returned to Manila. It was not uncommon for the government to pay them in treasury warrants rather than in cash. When they tried to turn these into cash, they had to pay a commission to the agent they approached. The agents involved in cashing the treasury warrants included government officials, who were later able to cash them in for the full face value of the warrants. Under the circumstances, many Filipino sailors found that they preferred taking their chances in Mexico rather than returning to their home country.

In his report to Philip V in 1739, Governor Fernando Valdes Tamon provided a description of the typical salaries received by the officers and crew members of the *Nuestra Senora de la Covadonga* and another vessel the *Nuestra Senora del Pilar*. The salaries were paid out to the officers and crew members per voyage. Both ships were outfitted at the port of Cavite in 1736.

Salaries of the Officers of the *Nuestra Senora de la Covadonga* and the *Nuestra Senora del Pilar*

Admiral of the fleet, *Nuestra Senora de la Covadonga* received a salary of 4,125 pesos.

Admiral of the *Nuestra Senora del Pilar* received a salary of 2,750 pesos.

Two Chaplains received 75 pesos each.
Two First Officers received 300 pesos each.
Two Mates received 150 pesos each.
Two Ship's Masters' received 150 pesos each.
Two Artillery Sergeants received 150 pesos each.
Two Petty Officers received 150 pesos each.
Two Carpenters received 150 pesos each.
Two Caulkers received 150 pesos each.
Two Divers received 150 pesos each.
Two Notaries received 200 pesos each.
Two Boatswains received 100 pesos each.
Two Surgeons received 100 pesos each.
Two Dispensers (Stewards) received 100 pesos each.
Two Water Bailiffs received 100 pesos each.
Two Third Officers received 150 pesos each.

Salaries of the Crew Members

64 Artillery Gunners received 100 pesos each.
160 Mariners (sailors) received 75 pesos each.
72 Spanish Cabin Boys received 50 pesos each.
120 Simple Cabin Boys (probably Filipinos and other Asians) received 25 pesos each.

Governor Fernando Valdes Tamon did not mention the ship's captain or his salary in his report, as this individual fell into a category all his own and earned vast amounts of money through the position. Given this premise, it would be difficult to calculate how much any captain earned on a typical voyage from Manila to Acapulco.

One eventuality, which was not discussed in many historical accounts of the Philippines and the galleon's crew members, concerns shipwrecks. If any crew members managed to survive a shipwreck, there was no indication if they were paid their salaries given the loss of the vessel. What was apparent was the fact that Filipino sailors were already having a problem collecting their salaries at the end of a voyage, so if they survived a shipwreck, it seems unlikely that the government in Manila would have provided them with their entire salaries. In the case of Spanish sailors in Spain, if there was a loss of a merchant vessel, the crew members were not paid their salaries, as the owner of the ship claimed that the survivors had already consumed provisions on the ship and that was their payment for serving on the vessel.

Chapter 11

Navigating the Galleon

In the hierarchy of officers aboard the galleon, whether it was part of the Atlantic convoy travelling from Cadiz to the Caribbean or from Manila to Acapulco, the role of the chief pilot was on a par with that of the captain and the ship's master. It was up to these three individuals to manage the vessel and ensure that it reached its destination safely and without incident.

The position of the chief pilot was crucial as he used navigational instruments to chart a course for the ship to follow. He had to read maps and charts and was familiar with landmarks, islands, sandbars, shoals and seacoasts along the way, in order to keep the vessel safely on its course and away from dangerous areas. He also understood weather patterns and cloud formations which were indications of calm and stormy weather, as well as winds and currents the ship encountered. Moreover, he knew something of sea life, the color and smell of the sea, and signs of land such as kelp and birds. It was up to him to identify the various depths of water the ship sailed through and the speed of the vessel. He also needed to know how to operate the sails and rigging of the ship, as they had to be adjusted according to his calculations and weather conditions. All of these elements provided the chief pilot with invaluable information to navigate the galleon. But he was also expected to understand the movements of celestial bodies – the sun, moon and the stars, in order to determine where the ship was positioned.

Through years of practical experience at sea, the pilots learned how to navigate, but as in Spain, they had to be certified that they were also knowledgeable in the use of navigational instruments and able to read maps and sea charts. As in the construction and manning of the galleons, where regulations concerning these procedures had been established in Spain, there is no doubt that the pilots working on the vessels in the Americas and in the Philippines were also expected to be equally qualified and experienced. In the case of the Philippines, it would have been totally irresponsible for the governor in Manila, who was in charge of hiring the chief pilot for a galleon, to appoint an individual to that post who was not up to the job. After all, it was the governor's responsibility to select officers who were able to ensure that the vessel's navigation was responsibly managed and that the ship reached its destination.

Initially, both the governor in Manila and the viceroy in Mexico City were responsible for the appointment of the officers of the

Manila-Acapulco galleons. This led to a number of disagreements between both parties, as well as amongst the appointees. By 1583, the government passed a law which allowed the officials of the Royal Treasury in Manila, to also participate in the appointment process including the selection of the pilots. But one of Manila's main problems continued to be the lack of qualified and trained pilots. There were mariners who, although experienced sailors thought that by merely observing a pilot at work, they were qualified for the job. Others thought that the Spaniards, who by virtue of travelling continuously on sea vessels, were somehow qualified as pilots.

Spain was also experiencing a shortage of trained pilots. In the early sixteenth century, there were very few pilots in the peninsula who understood the sea routes across the Atlantic and who were familiar with the coasts of the Americas. As a result, many ships were lost at sea. Due to these losses, the House of Trade realized that it needed to provide an educational program for mariners including officers such as captains, ship's masters and pilots. The courses they devised consisted of navigational studies in order to improve the success rate of the ships sailing across the Atlantic to the Americas.

In 1545, the House of Trade established its own school of navigation in Seville. The courses were taught by their own professors who were experienced chief pilots and cosmographers. They also provided examinations of the candidates at the end of their studies and issued a certificate to those individuals who completed the courses. The instructors were often recruited by the House of Trade through a competitive system. That is, when a professor was required by the House of Trade, the Council of the Indies in Seville placed notices at the various universities in the country, as well as at the ports of Cadiz and Sanlucar where many mariners lived, in an attempt to find qualified professors. It was difficult finding professors who were competent in theoretical, mathematical and practical experience. Ultimately, the House of Trade made the final decision regarding the chief pilot and cosmographer professors they chose for the navigation courses.

At the House of Trade, mariners learned how to use declination tables to calculate a ship's position. They were shown how to prepare maps and charts and how to read the ones supplied by the House of Trade. Moreover, they were instructed in the operation of navigational instruments such as the astrolabe/quadrant, compasses and other devices used to calculate the angle of the sun and pole star.

Prior to the House of Trade's effort to promote a navigational program for mariners, those individuals who could be classified as chief pilots, as they had a wealth of personal seafaring experiences, taught navigational skills in their own homes which had been turned

into schools for mariners. It was a private business of their own, and they were paid for their services by the students who flocked to them. As professors of piloting schools, these individuals were also called upon to interview proposed mariners who were interested in serving on the ships as pilots. They decided whether or not a mariner was a suitable candidate to serve as a pilot on a vessel. The chief pilot professors provided the piloting student with a certificate at the completion of his studies indicating that he was qualified for the job. As his activities did not come under the scrutiny of the government, the professor was apparently free to select whomever he wanted for a career as future pilot, as well as providing these individuals with the credentials they needed to work on the sea vessels.

Individuals, who were hoping to find employment as a pilot, had to produce one of these certificates. Without this type of accreditation, he was often unsuccessful in finding work. Even though the private pilot schools thrived, they became a problem the House of Trade had to address. The difficulties were mainly due to the fact that some students received accreditation without actually being qualified to serve as pilots. They were also concerned that the schools were over charging the students for their services. But the bottom line was the realization that the schools were unregulated by the government, and as such, pilot candidates received certification even though they were unqualified. This, in turn, led to further losses of sea vessels

By 1552, the House of Trade's navigation institution and the private home schools were both issuing certificates to individuals who passed their exams. By 1604, a judge from the House of Trade presided over the examinations of pilots and this replaced the private school's examination system. An examined pilot had to meet certain criteria in order to qualify as a candidate for a piloting certificate. In addition to knowing how to read and write and understand mathematics, he had to be a native born Spaniard. Before 1534, any individual, whether native born or a foreigner could attend a private piloting school and receive certification. This changed as it was commonly known that foreign candidates tended to provide their professors with gifts in exchange for the certificate.

The candidate had to be at least twenty-four years old or older to qualify as a pilot. He had to be of good character and ancestry and was required to have had at least six years of practical experience on vessels traveling to the Americas. For the experience component of his qualifications, he was expected to produce two witnesses who were both pilots and had sailed with him on the same vessels. The witnesses and the candidate were required to attend a special meeting with the chief pilot of the House of Trade and members of the Mariners Guild of Seville. At the meeting, the witnesses and candidate confirmed that

he had indeed worked on various vessels, and as a result had gained practical experience as a mariner. The candidate was interviewed by the chief pilot and Mariners Guild to establish the extent of his navigational knowledge and his understanding of geography and sea routes. He was often asked to chart out a route to some location in the Americas in order to determine whether or not, he was capable of plotting out the correct course to the destination selected.

But not all candidates succeeded in meeting the House of Trade's criteria. In that case, the candidate was often required to make further journeys to and from the Americas, before he could reapply for a pilot's certification. However, while the House of Trade tried to maintain a level of legitimacy regarding the certification of candidates, there were at times individuals who abused the system. For example, it was not unusual for candidates to produce bogus witnesses who attested to the candidate's prior experience on a vessel to the Americas. This, of course, led to some unqualified candidates becoming certified as pilots, which in turn, led to further ship losses due to a pilot's inexperience or neglect. If a pilot was accused of negligence, he could lose his certification for a period of time.

It was also discovered that foreigners were certified even though the House of Trade clearly stated that this was against its regulations. It was revealed that in 1551, as many as forty foreigners had received their certificates from the House of Trade. Other candidates circumvented the system by obtaining the examination questions in advance enabling them to successfully pass the test. By the end of the sixteenth century, it had become customary for the candidates to provide the chief pilot with a gift of cash when they received their certification.

The House of Trade's navigational courses were also established in order to do away with the privately held classes conducted by the chief pilots in their own homes. It was a measure taken by the House of Trade in order to control of a situation that had been allowed to operate and flourish in Seville for too many years without any regulations imposed upon it. As trade with the colonies increased, it was deemed necessary to take a stand in the matter. Instead of allowing the pilots to be privately instructed by the chief pilots, the House of Trade's program stated that a candidate had to study in their own school for a period of at least one year, and he was required to take most of the courses they offered in navigational theory and practice, as well as how to implement this in navigation. For some experienced seafarers, the strict rules were difficult to follow, as they also had to earn a living at sea, so the regulations were eased in 1552 for those individuals.

By 1555, the course of instruction was reduced from one year to

three months, and then in 1568 it was again reduced by an order from the Council of the Indies, to just two months. The courses included the study of astronomy, as it was understood at that time, and cosmographical studies. Students were required to know how to read and make sea charts and how to use the navigational instruments available during that era including the compass, astrolabe, quadrant and ballestella (cross staff/forestaff or Jacob's staff). All of the navigational instruments then in use were known by skilled mariners since the thirteenth century, except for the cross-staff which became useful to mariners in the sixteenth century. They were also required to know the cycles of the moon and to learn when it was feasible to enter rivers and bays according to tidal action.

On the Atlantic fleet vessels travelling to the Americas, along the "Carrera de las Indias" (Armada of the Indies Route), there was usually a chief pilot (piloto mayor), who served in that position for the entire fleet. The position of chief pilot was considered a most prestigious appointment and one of utmost authority. This individual was usually selected for the position by royal appointment, which he held for the rest of his life. Initially, the chief pilot was chosen by the House of Trade, which then informed the king of their choice. The chief pilot's role entailed duties such as conferring with the captains of the individual galleons in the fleet, and the selection of the pilots for each vessel, as well as discussing with them the course the convoy was to follow during the voyage. The pilots on the individual galleons also had several assistant pilots who reported to him and could take over his duties if he became incapacitated or died. Up until the middle of the seventeenth century, the individual pilots for the galleons had been selected by the captain general of the fleet and approved by the Council of the Indies. This process then changed, and the chief pilot became instrumental in the selection of the individual pilots for the galleons in the fleet.

The men who were selected to serve as pilots were often older men, in their forties, and more experienced than most mariners. On the galleon, they were held in high regard and respected, but in some cases, if the pilot was inexperienced and this was noted by those on board the vessel, this led to an air of anxiety on the ship. One example of the type of apprehension felt aboard a ship was with an experienced older pilot and his assistants who, on the other hand, were inexperienced. The comments of Don Cristobal de Eraso regarding the pilots were detailed in a letter he wrote to the king on his voyage on a ship which was part of a four vessel fleet in New Spain in 1578. He wrote that, "I found myself very confused on this voyage, because, although the pilot brought along was the oldest and most experienced on this route and dealt properly with the matters

related to charting the course and calculating the latitude, he and all the others were not very experienced in the knowledge of this coast, which is what really mattered … and it is important that Your Lordship and the Royal Council order … that no pilot be examined without first-hand knowledge of all the coast and without having seen and taken soundings of it himself …because all the pilots when faced with a disorienting storm, get perturbed and do not know what to do." [127]

There is also the example of another negligent pilot of the *Nuestra Senora de la Vida* which sailed from Cavite to Acapulco in 1620. The ship was piloted by an inexperienced navigator and was stranded on the reef of Mindoro Island in the Philippines. The passengers who survived the wreck were so angry with the pilot that they hanged him on the shore.

Although there was a shortage of pilots in the Philippines, the government tried to have as many as ten to sixteen pilots in the colony. A decree was passed by the Spanish government stating that only trained and experienced pilots were to be employed in the Philippines, this was not always possible due to the shortages. Even though the pilots were highly respected in Manila society, Schurz wrote that their lives in the colony were more difficult than for pilots in Spain or in the Americas. He said that, "The career of a pilot on the Philippine line was far more arduous than in the service between Spain and America. The voyage was much longer and more dangerous and other conditions were less attractive. The compensation for all these was in the ease which a pilot might enrich himself by trading, but this very opportunity removed the stimulus for further service." [128]

Navigation Books

A number of treatises on navigation were published in the sixteenth century. The books were authored by experienced navigators and contained geographical details and navigational information of interest to mariners. Books such as the "Arte de Navegar" (the art of navigation), by Pedro de Medina was published at Valladolid in 1545. In his book, he provided information on cosmography and practical navigation. The book was translated into Italian, French and English and was used as a textbook in France for almost one hundred years. Another book was the "Breve compendio de la esfera y de la arte de navegar" (the brief compendium of sailing and the art of navigation), by Martin Cortes, was published in Seville in 1551. The work of Martin Cortes is interesting as he was a proponent of the idea that the occurrence of variations when using a mariner's compass may have been due to the influence of a magnetic pole as opposed to the terrestrial North Pole. This was, at the time, considered a novel idea which decades later formed the basis of intense study in order to

determine how this may have been the case.

Probably the most notable work on navigation was that of Juan de Escalante de Mendoza and his “Itinerario de Navegacion de los mares y tierras occidentals” (itinerary of navigation of the sea and occidental lands), published in 1575. In his book, Escalante de Mendoza wrote about piloting the routes from Spain to its colonies in the Americas and of the sea conditions encountered by seafarers during their travels across the Atlantic. He provided information on the currents, winds, weather and other occurrences one might encounter on the voyage. Escalante de Mendoza was an experienced mariner having served as a seafaring man during a twenty-eight year career. He became the captain of a trade ship in the Caribbean and provided an insight into the world of seafaring while incorporating his own personal experiences into his book. Still the main problem for mariners was the question of how to determine longitude at sea. In 1598, Philip III offered a hefty reward for anyone who could solve the longitude problem, but this goal remained elusive until the eighteenth century.

In a book entitled “Amerigo Vespucci: Pilot Mayor,” by Frederick Pohl, he stated that Vespucci struggled with the question of longitude. He wrote that Vespucci had voiced his opinion about the subject saying, “As to longitude, I declare that I found so much difficulty in determining it that I was put to great pains to ascertain the east-west distance I had covered. The final result of my labors was that I found nothing better to do than to watch for and take observations at night of the conjunction of one planet with another, and especially of the conjunction of the moon with the other planets, because the moon is swifter in her course than any other planet. I compared my observations with an almanac. After I had made experiments many nights, one night, the twenty-third of August 1499, there was a conjunction of the moon with Mars, which according to the almanac was to occur at midnight or a half hour before. I found that at midnight Mars’s position was three and a half degrees to the east. ”

The problem of calculating longitude was solved in the eighteenth century by an English clockmaker, John Harrison, who built very accurate clocks-chronometers for use on ships at sea. The ship’s clock would be set to the time of the port of departure and maintained at that time just by daily winding. As the ship traveled further away, the time of mid-day would no longer match the time of the departure port. The difference in the time between the ships current position and the point of departure could then be easily calculated in degrees of longitude.

John Harrison’s clocks are currently housed at the Greenwich Maritime Museum in London. Up to the eighteenth century, pilots were able to calculate their positions at sea using the equator, but

they were unable to determine longitude as there was no point on the Earth that they could use as a reference meridian point. By the twentieth century, the use of marine chronometers and wireless telegraphy time signals were used to determine longitude.

British cartographers used the Greenwich meridian in London as a longitude reference point, while the Spaniards used El Hierro, a small island in the Canary Islands as their reference point. It was known to the Spaniards as the "Isla del Meridiano" (the meridian island). Presently, the longitude meridian that passes through the Royal Observatory in Greenwich, London is used as the zero degrees of longitude known as the Prime Meridian, and it is the main reference point used worldwide.

Navigational Maps

One of the primary jobs of a pilot was to record the geographical details of the lands he traveled to on his maps and charts. Practically all of the maps, then available in Spain, were prepared by mariners and pilots as they garnered information during their voyages. As they sailed along coastal areas, they noted landforms, natural harbors, coves, bays, rivers, and distinguished land features. These early maps were crude and poorly executed, but they contributed to the overall knowledge which was accumulated about the countries they visited, and this information, in turn, was shared with other mariners and mapmakers.

When the pilot returned to Seville, he had to report, under oath, to the House of Trade, where he provided the officials there with his findings. At the House of Trade, the new details noted by the pilot were added to a main map of the world known as the "Padron Real." The altered maps and charts were then handed out to the mariners sailing to the settlements in the Americas.

The details the pilot added to the maps and charts included a description of the islands he came to, as well as where they were located and the distances from one location to the other. The production of maps in Andalusia became a thriving business, but many of the maps contained errors and were thus, of little value to experienced navigators. As a result of all these conflicting maps, the House of Trade in 1508, asked the famed and notable explorer/navigator and cartographer, Amerigo Vespucci (born in Florence, Italy in 1454 and died in Seville on February 22, 1512), to create an official map the Padron Real *(*Padron General*)*. Vespucci had served as a chief pilot for Spain's King Ferdinand in 1508, and at that time, he was employed by the House of Trade where he served as its chief pilot professor. He tried to modernize the standards of navigation then

taught at the House of Trade.

As the map was being prepared, the House of Trade requested that Vespucci add to it all of Spain's possessions in the Americas. From then on, pilots were ordered to use the Padron Real map when navigating in the Americas or face a fine for not doing so. Each year, chief pilots, cosmographers and cartographers met together to add new details to the map as new information became available to them by the pilots traveling on the Atlantic route to the Caribbean.

However, while navigators had the Padron Real map that they could employ during their journeys, there were still many other maps which were being produced outside of the House of Trade's jurisdiction. They contained conflicting information. By 1526, the House of Trade felt that it had no recourse but to create a definitive new map for use by all mariners. The project of establishing the new map was turned over to Fernando Columbus, the son of Christopher Columbus. The map was to be produced in three forms – as a globe (a sphere), a world map, and a sailing chart. Almost one hundred experienced navigators contributed to the production of the three components of the new map, and the project was completed in 1536.

In addition to the maps produced in Spain, during the sixteenth to the eighteenth centuries, the Portuguese and Dutch produced their own maps of the regions they explored in the Americas and in Asia. No doubt, the Spaniards were able to obtain copies of these maps, and used them at the House of Trade's navigation school. A map of Southeast Asia was produced by the Flemish cartographer and geographer, Abraham Ortelius (1527-1598). He used information which was recorded by Francesco Antonio Pigafetta, a young Italian diplomat who kept a diary while he sailed as a member of Ferdinand Magellan's expedition of 1519-1522 to the Philippines. The Ortelius map was produced in Amsterdam during the years of 1570-1574, and was known as the "Theatrum Orbis Terrarum" or "Theater of the World." In 1571, Fernao vaz Dourado produced a Portuguese map of the East Indies. On the map, flags were used to point out the location of Portuguese trading houses in Asia.

Navigational Instruments and Equipment

With the onset of increased travel to the Americas, and as greater numbers of settlements were established there by the Spaniards, navigation became a crucial area of concern and study. The science of navigation probably can be said to have arisen through the activities of the Portuguese mariners in the fifteenth century. Under John II of Portugal in 1484-85, the use of the astrolabe was simplified through the availability of solar tables, which allowed mariners to easily determine latitude using the meridian altitude of the sun. These new calculations allowed the mariners to make better use of the astrolabe

in their navigational calculations.

Since the discovery of the New World by Christopher Columbus in 1492, the study of navigation had not changed very much by the sixteenth century. The purpose of navigation was to establish the ship's direction, time, speed and depth of water through which it was sailing. The use of the compass, hourglass, back-staff, cross-staff, log-line, astrolabe, quadrant, and rudimentary charts and maps were all that was available to mariners by that time.

Magnetic Compass (Bitacora), Sand Hourglass (Reloj de Arena), Log Line and Plumb Line

The basic elements of navigation, which were employed by Spanish sea vessels, included the compass, the sand hourglass, a log line and a plumb line. The compass was originally invented in China in the second century AD and transported to Europe by Muslim mariners where it was used in the eleventh century to navigate sea vessels. A European compass was invented during the Medieval period in England about 1300, which evolved into the models used on the Spanish ships. The purpose of the compass was to locate a ship's direction according to Earth's magnetic poles. As a navigational tool on sea vessels, its magnetized needle always pointed towards the North Pole. The compass's dial indicated the planet's cardinal points of north, south, east and west. For sea travel the compass was usually housed in a wooden standing box known as the compass binnacle or "bitacora." This was placed at the helmsman's station, in front of the whipstaff, where it was protected against the elements of rain and sea water.

Another important component of every vessel, until the development of a ship's clock, was the sand hourglass. It was basically used to tell time by turning the hour glass upside down as soon as the sand emptied from one receptacle into the other. Night watches at sea were marked hourly in this way and took place four times during the night time hours on the Manila galleon. The compass, hourglass and log-line were used to determine a ship's position which was known as "dead reckoning."

"In dead reckoning, the pilot estimates a ship's position by keeping a careful record of its movement. The initial point of departure for dead reckoning is usually the last fixed point the navigator obtains from objects on land at the start of a voyage. From this point, true courses steered and distances traveled as recorded using a log line are plotted on a chart. Points along the dead reckoning line, representing successive positions of the ship, are labeled with the appropriate time and notation. The dead reckoning line on the chart is important to the pilot because it indicates at a glance the theoretical position of the ship, the track of the ship should have followed and the direction in

which the ship is traveling. "[129]

The speed of the vessel was also estimated using a log-line. This was a thin rope knotted at equal spaces with a piece of wood attached to one end. The rope was dropped over the side of the ship at the bow into the sea by the pilot or one of his assistant pilots, and as the knots passed through his fingers per minute, this determined the speed of the vessel. From the use of the knotted rope the word "knots" came into use as a nautical term, which meant the speed in which a ship was sailing. One knot is the equivalent of one nautical mile.

A plumb line was used to determine the depth of water the ship was sailing through. The line had a lead weight attached to one end and was marked with measurements to determine the depth of water. It was often used in coastal or shallow waters especially during periods when visibility was poor and there was a danger of encountering reefs and rocks closer to shore. The plumb line was held by one of the chief pilot's assistants and dropped into the water measuring how deep it descended to the seabed.

Armillary Sphere and the Astronomical Circle

Before the discovery of telescopes, the armillary sphere was used to observe the motions of celestial objects. It was also known as a "spherical astrolabe" or "celestial sphere." The sphere was first used in Europe during the Renaissance period. It was an ancient navigational aid dating from the Hellenistic Period when it was first invented by Eratosthenes (276-194BC) of Greece. The word "armilla" is the Latin word for a circle. The ring was designed using various graduated circular rings connecting the Earth's poles and equator. Within the sphere, at its center was a ball representing Earth. Its purpose was basically to show the motion of the stars as they circulated around Earth and in this way, help the user to determine the positions of celestial objects and the vessel's position on the nautical charts.

A navigational instrument found at the *San Diego* excavation site was an astronomical circle. The instrument was modeled after its predecessor the armillary sphere, but it had the attributes of an astrolabe, in that, it was furnished with an alidade (movable pointer), rings and measurements along the outer rings. It also appears that it had at one time a handle on one end where the navigator could hold it up to formulate his calculations. The main plate may also have been constructed in such a way as to allow for its ability to move freely with the movement of the ship in the same way as a compass needle. Although the artifact is not intact, it provides an indication of its original use. When the archaeologist discovered the astronomical circle at the excavation site he said that, "Only as it was being restored did it suddenly become apparent that the metallic circles around the flat disc constituted the elements of a complex

astronomical system deployed in a spherical fashion around the disc which supported the alidade. It is an astronomical circle with three rings. Unfortunately, the piece is not sufficiently well preserved to allow us to explain with certainty the function of each graduated ring." [130]

Backstaff (Back Quadrant)

As pilots needed to be familiar with astronomy and celestial bodies such as the sun, the moon and the stars, in order to calculate the ship's location at sea, it was important to measure the sun's altitude above the horizon. This was determined using a complicated piece of equipment using geometric triangular and curved pieces of wood known as the backstaff. The name for the piece of equipment came from the fact that the pilot, when using the device, had to turn his back to the sun and held it up to his eye. The pilot noted the sun's image, which was reflected back to him as a shadow on the backstaff. He used this shadow to measure the sun's altitude according to the calculations edged onto the device. At the equator, the sun appeared straight above at twelve noon. Knowing how low in the horizon the sun was positioned, the pilot was able to determine the ship's latitude and distance north or south of the equator, as well as its location on his sea charts.

Ballestella (Cross Staff)

The wooden ballestilla or cross staff was known by a variety of names such as the fore-staff, Jacob's Staff and its Latin derivation of "Radius Astronomicus." It was initially used for astronomical observations on land, but it was later modified for use on a ship to locate its position. The pilot used the cross staff to determine the ship's latitude by calculating the altitude of the sun and the polestar. It was called a cross staff as it resembled a cross with a longer main staff and a shorter staff crossing it which was known as the transom or transversal. The transom slid up and down the main staff when making calculations. The longer staff provided graduations for length.

The cross-staff was introduced as a device used by mariners around the 1514. Like the backstaff, the cross-staff was also held up to the eye and pointed at the horizon. Once in position, the pilot looked through brass fittings that had inset holes which were placed at the ends of the longer staff. The transom was slid forward or backwards along the longer staff to determine the altitude of the sun or polestar according to the position of the transom on the longer staff. The cross staff was often operated by using three transoms which could be used to provide a variety of angles from which to conduct observations of the sky.

Astrolabe and Quadrant

The astrolabe was an ancient instrument used by astronomers, astrologers and navigators to fix the location of celestial bodies. It was available as far back as the Hellenistic period in 150 BC and since then, it had been modified and re-invented and in use until the seventeenth century. A version of an eleventh century astrolabe was created at the request of Jewish and Moorish astronomers of Toledo, Spain who commissioned a metalworker Azarquiel (1029-1087 AD), to produce the astrolabe. Apparently, Azarquiel became well known as a producer of precision instruments such as the astrolabe and for his knowledge of astronomy, which had been basically self-taught. From use initially in astrology and astronomy, a variation of the astrolabe was adapted for use in sea navigation, and it became known as a "Mariner's Astrolabe" or the "Sea Astrolabe."

The sea astrolabe was used in conjunction with the cross staff and the quadrant. It was employed to calculate the altitude (declination) of the sun, moon and the polestar and thereby finding the ship's latitude. During this process the pilot took into consideration the fact that at the Equator the sun was positioned directly above at noon.

The astrolabe was first used in Spain by Ramon Llull, a Majorcan astronomer in 1295. However, it was Martin Cortes de Albacar (1510-1582), a native of Zaragoza, who described how to make and use the device. After moving to Cadiz in 1530, he was employed by the House of Trade where he worked as a chief pilot professor. He was the author of a book on navigation entitled, "Breve Compendio de la Esfera y del Arte de Navegar," which was published in 1551.

The brass astrolabe was composed of a graduated circle with a movable pointer (alidade), which was used to measure vertical angles. Around the outer edge of the circle were measurements used to determine the declination of the celestial bodies. It was also commonly referred to as a "Ring." To use the astrolabe, the pilot would hold it up by a ring which was located at the top of the device. It was held in a vertical position towards the object to be measured such as the sun. As the alidade was pointed at the sun, the pilot read the altitude off the astrolabe's outer degree scale edged onto the rim of the device. If the pilot was taking measurements of the sun, rather than looking directly at the sun, it was its shadow which was measured.

The angles formed by these instruments were compared to published tables of solar declination and mathematical calculations. In this way, the pilot was able to determine the ship's latitude and location on a sea chart. Obviously, the instruments were complicated devices and could only be used by experienced and knowledgeable pilots who understood mathematics.

The quadrant was known as another version of the astrolabe. The

quadrant was primarily used to find the latitude of the ship and its location on the sea charts. This was established by measuring the angle of stars on the horizon of up to 90 degrees. During the sixteenth to the eighteenth centuries, variations of the quadrant were used by pilots and these included the Nautical Quadrant and the Two Sector Quadrant.

The *San Diego's* Astrolabe

During the excavation of the *San Diego* shipwreck, the archaeologists uncovered a bronze astrolabe in a state of good preservation. It has been estimated that the astrolabe was probably produced before 1588. It was typical of the types of astrolabes used by pilots on the Manila-Acapulco galleons during the sixteenth century. As a result, it provides an insight into the navigational techniques used by the pilots during that time period. The uncovered device was described by the archaeologist after it was restored. He stated that it, "weighed 2,434 grams, measured 182.5 mm in diameter and was between 17 mm thick at the top and 18 mm thick at the bottom. This difference in thickness between the upper semicircle and the base was a construction feature which was frequently observed on instruments manufactured in the sixteenth century, but the practice seems to have disappeared during the following century. The core consisted of three spokes without footers. The intersection of the three spokes and the one which supported the counterweight was in the form of a circular medallion. The upper semicircle was graduated in intervals of 5 degrees, but the numbers are not indicated, a characteristic this astrolabe shares with the Valencia astrolabe in the Greenwich Maritime Museum." [131]

"The rim is finely graduated into four concentric circles and the vertical and horizontal axes of the instrument are represented in the form of a thin groove on the spokes and the counterweight. The lower portion, which is designed to stabilize the device, has a very rough half-moon shape, flattened on top and with beveled edges. There is a slight asymmetry between the left quadrant, which has a rather regular shape, and the right quadrant. The two sights consist of quadrangular plates pierced by a conical eyelet, the base of which is turned toward the outside. The points of the alidade are delicately worked. The axis of the alidade is blocked by a duck-bill pin; on the face of the instrument there is a knob decorated with twelve spokes in a wave pattern, identical in design to the one on the Valencia astrolabe. The alidade and the sights consist of a single piece of metal, as is the case on the Valencia astrolabe. The instrument is finally equipped with a clamp and a suspension ring, fastened to a 'throne,' the axes of which allow the instrument to oscillate. The lower pivot allows the instrument to oscillate front to back, while the upper pivot

allows it to move laterally. The suspension ring is also equipped with a 'handle' which makes it possible to hold the instrument with three fingers. Although rare, this feature has been observed on four other astrolabes, the Barlow, Kronborg, Caudebec instruments and the astrolabe recovered from the wreck of the *Banda*. "[132]

A Spanish Chief Pilot in Manila Invents a New Type of Astrolabe

On June 27, 1597, a Spanish resident of Manila for nine years, Hernando de los Rios Coronel, wrote a letter to Philip II. In his letter there was a short introductory passage from the Governor of the Philippines, Luis Perez Dasmarinas, in which he expressed his sincere regard for Hernando de los Rios Coronel. The governor wrote that Coronel was a highly educated and respected man in the Philippines, and that he was well versed in the studies of mathematics, astrology and the law. Moreover, he was an experienced navigator and cartographer and was involved in teaching navigation courses to mariners who desired to become pilots. The governor praised Coronel so profoundly, and said that he had even offered him the post of administrator of the Royal Treasury in the capital, but he had refused the offer and instead devoted his life to the church as a priest.

After Coronel arrived in Manila in 1588, he became a popular member of the Spanish community. Amongst his friends were government officials and members of the church. While he lived in the capital, he produced maps of Luzon, Formosa (Taiwan) and China. The maps are currently housed at the Archivo General de Indias in Seville. At one point, he also served as the captain of a flagship for Governor Dasmarinas, who organized an expedition to Cambodia, with a plan to conquer that land in 1598. Ironically, the flagship was shipwrecked off the coast of China. After this unfortunate incident, Coronel decided to become a priest. Nevertheless, he continued to pursue his studies of scientific subjects and writing. As an author, he wrote a "Memorial on Navigation and Conquest (of Manila)," and "Reforms for the Philippines," which was published in Madrid in 1619.

In his letter to the king, Coronel wrote of the need to have a Spanish trade post in China, as well as suggesting several trade routes the Spanish vessels could use from Spain to the Caribbean. But what was most noteworthy in the letter, was the fact that he stated that he had invented a new type of astrolabe. Excited by his invention, he said that he was in the process of writing a book about the device and how it could be used by navigators. Apparently Governor Dasmarinas was able to see the astrolabe and was so impressed with it that he said of Coronel, "He has made a very peculiar instrument of general usefulness in many curious and important ways, particularly in navigation, for getting bearings and taking measurements, which are

rendered very easy. ”[133]

Coronel went on to discuss how the astrolabe could be used stating that, “With this astrolabe I have discovered can be found the altitude from the pole and the latitude of any region whatsoever at any hour of the day, and at the same time it will tell the hour, in the same way that it gives direction at night by any known star, more easily than the mariners usually take it at midday. Besides this, it also serves like other astrolabes at midday, to indicate the various points of the compass, and show and verify with precision the deviations and deflection of the needle from the pole. In this way it serves to give the longitude where one is sailing, on whatever parallel to the equinoctial. Likewise it shows the position of the stars even when all their latitudes and declinations are unknown, so easily that even the most uninstructed can in a short time learn it. It is of use in other curious, useful, and important ways, for the perfection of this art, which can by its aid be verified. As it is an article so curious and useful, the said Luis Perez de Dasmarinas persuaded me to give an account of it to your Majesty, with a brief relation and discourse concerning the information which I have of these parts. ”[134]

In another letter dated from the seventeenth century to the king, Coronel wrote of reforms which were needed in the Philippines and asked for aid against Dutch offensives in the Philippines. The letter also mentioned navigation. When he wrote the letter, Coronel had already been appointed by the king to the position of procurator-general of the Philippines. It is interesting to note, that he wrote of a meeting which was held in Manila with Spanish and foreign pilots. He said that, “I mention the weather for from this time on the weather is favorable as was determined in a general council of experienced pilots of all nations that was held at Manila by governor Don Juan de Silva. I mention also the longitude because the time taken to go by the above route (northern route from the Philippines towards Japan and then to California and Acapulco) is known namely to one who follows his course without making fruitless stops.”[135]

There was clearly a shortage of qualified Spanish pilots in the capital during Coronel’s time in Manila, and the government had no choice but to employ foreign navigators for the galleons. Le Gentil also mentioned this shortage and how inexperienced men were asked to navigate the vessel. “That same year 1766, another Frenchman employed in the Acapulco trade as a chief navigator died in Manila. The result was that there were no navigators left in the city. They were in such a plight at the time I left Manila in 1768, that they had put the navigation of the galleon which was to go to Mexico that year into the hands of a young man, who had never made the voyage before and who, to cap the climax, had lost in 1766, a little frigate

which ran under his command from Manila to the Mariana Islands, and on which I had intended to embark. Upon his return from that expedition, all the navigators were consulted and asked to give their opinions concerning the construction of that little vessel – for the navigator in charge contended that the loss was due to defects in her construction. I do not know what their opinion was but as the young navigator had been appointed to make the Acapulco voyage in 1766, I assume he won his case. The *San Carlos Borromeo,* while he was navigating it, failed to make the voyage and had to put back." [136]

The vessel managed to return to Cavite where it was repaired. The ship was too top heavy with a very large stern superstructure and forecastle, which were both reduced in size before the ship could once again resume its journey to Acapulco. There is no indication if the young navigator was again allowed to pilot the vessel, but we can only presume that this was not the case as the galleon arrived safely in Acapulco. Undoubtedly, a more experienced pilot had suddenly turned up in Manila to navigate the ship.

The Story of a Manila-Acapulco Galleon's Chief Pilot

The pilots, who sailed the transpacific trade route, endured their own set of trials and tribulations. These difficulties often involved their families and the loved ones they left behind at home, while they sailed on the galleons and attended to their duties as navigators. The sort of problems they encountered was illustrated by the story of Geronimo and Solina Galvez, a Spanish couple who immigrated from Spain to the colonies in the Americas, where they hoped to start a new life together.

As Geronimo Galvez was born in the seaside city of Cartagena, on Spain's Mediterranean coast, it was no surprise that he decided to follow a career as a mariner. As a crew member of various vessels, his travels took him to the coastal areas of Spain in Cadiz, where he worked as a seaman. From there, he traveled the West Indies. When he immigrated to the colonies in the Americas, he had little choice in the matter. He apparently had to leave the peninsula, as officials with the Spanish Inquisition, were already becoming curious about him and his ancestry, which they suspected was of Moorish origins.

The Spanish Inquisition or the Tribunal of the Holy Office of the Inquisition was established by Ferdinand II of Aragon and Isabella I of Castile in 1478. The whole purpose of the Spanish Inquisition was to uphold Christianity in the peninsula, and to ensure that converts to Catholicism (Jews and Muslims) adhered to the religion they were forced to adopt or face torture and exile. Consequently, for the Galvez family, the move to the colonies turned into a matter of self preservation. The further away they could escape from the malicious officials of the Inquisition, the better. The activities of the Spanish

Inquisition eventually spread to the overseas colonies. It had its beginnings in Mexico in 1570, and as the Philippines came under the jurisdiction of the viceroyalty of New Spain, it also reached the archipelago.

But when the Galvez family arrived in Mexico, the terrors of the Inquisition were still unknown in the country and for the moment they were relatively safe. In any case, Galvez knew full well how the Inquisition operated and its capacity to inflict cruel and painful acts in an attempt to make sure that the converts or "converses," continued to follow the dictates of the Catholic Church and its belief system.

The Galvez family had already been persecuted by the Inquisition. His wife's father had been arrested in Spain, tortured and died on the rack. Her mother died soon after of a broken heart and grief. After this sad episode, the Galvez's decided to sail to Mexico. They arrived in Veracruz and remained there for one year. They then decided to move to Acapulco where they lived happily for three years - away from the terror and stress that they had experienced back home. Galvez was already working by then as a chief pilot on the Manila-Acapulco galleons.

In 1689, he sailed aboard the *Santa Rosa de Lima* to Manila and left his wife alone in the city - awaiting his return. Although, they were apart much of the time, as Galvez served on the galleons, which often took him away from home for many months at a time, they managed to remain contented with their lives.

However, their happiness ended when in 1692 a young Spaniard, Sebastian de la Plana, arrived in Acapulco and became entangled with the Galvez's. He was staying in an inn, as he was planning to sail to Manila on the galleon. One day, as he walked along the streets of the town, he spotted Solina Galvez and became infatuated with her. It was love at first sight. He pursued her relentlessly, trying to seduce her. She, on the other hand, was repulsed by him and rejected his attempts to charm her. Eventually, in frustration, he hired several thugs to kidnap her while she was walking along the seashore. When the men brought her to him, he raped her.

She returned home in a distraught state and wrote a letter to her husband telling him how she had been attacked and raped by Sebastian de la Plana. A few days later she was dead. Some thought that she had committed suicide and had taken poison to end her life because she was so distressed by what had happened to her. Soon after her death, Sebastian de la Plana sailed from Acapulco to Manila on the galleon.

In the meantime, in the Philippines, Galvez returned to Acapulco on the *Santa Rosa*. When he arrived in Mexico, he was informed of his wife's suicide. He vowed to take revenge on Sebastian de la Plana, as

he considered the man his wife's murderer. Galvez placed a monument at his wife's burial site in the Acapulco cemetery with a plaque that simply said, "I will repay."

In Manila, Sebastian de la Plana knew that Galvez would be coming after him and seeking revenge. He was terrified and in an attempt to conceal his identity, he changed his name, grew a beard and had his face disfigured with a scar by a local surgeon. Galvez returned once again to Manila on the *Santa Rosa* and tried to find de la Plana with little success. He hired several agents to find him even if they had to travel to China in their search for the Spaniard. Galvez returned to Acapulco, while his agents began searching for de la Plana in China, Japan, and the Moluccas and even in Goa, India. They eventually found him working for the Portuguese in Macau. Galvez's agents were successful in convincing Sebastian de la Plana that his part in Solina Galvez's death had already been forgotten in Acapulco. They said that he could return to Manila without any fear of reprisals against him. As a sweetener, they also said that they knew of a wealthy widow he could marry in Manila. He was delighted with the news they gave him and by the prospect of marrying a wealthy woman.

By the time they returned to Manila, Galvez was already in the city. When they informed Galvez of their success in finding Sebastian de la Plana, they arranged for the two men to meet on the *Santa Rosa* which was docked at the Cavite shipyard. At the time, there were only a few crew members on the vessel, as it was being prepared for its next voyage. The agents managed to convince de la Plana, that they had been involved in transporting unregistered cargo on the galleon, and that they would share their profits with him. All he had to do was to accompany them to the galleon, which he agreed to do.

Once they came aboard the galleon, Galvez attacked de la Plana. He asked the agents to tie the left hands of both men together as he planned to fight de la Plana to the death. They fought each other using daggers. Even though Galvez stabbed de la Plana several times, he managed to escape from Galvez, untying the rope that held their hands together. He ran to the rigging and began climbing upwards to avoid Galvez's blows. Galvez followed him up the rigging with a dagger between his teeth, and as he climbed the ropes towards his adversary, de la Plana missed his footing and fell to the deck breaking his back in the fall. He was unable to move as he was paralyzed from the waist down.

De la Plana was taken from the galleon to a house in a criminal ridden section of Manila. There, they placed him on a bed, but made no attempt to help him or ease his pain. Instead, Galvez took out of his pocket a small miniature portrait of his wife, and placed it near de la Plana, so that he could look at the portrait as he lay dying. De la

Plana asked for a doctor and a priest, but Galvez refused his requests. When he asked for some water, Galvez also refused to bring him something to drink. He just sat there, and repeated over and over again de la Plana's crime and waited for him to die. De la Plana remained alive for three days, before he passed away.

After his death, he was buried by the friars of the Misericordia in Manila. Meanwhile, Galvez returned to the galleon and to his duties as a chief pilot. When he returned to Acapulco, on the *Santa Rosa*, he decided to end his career as a mariner. He traveled around Mexico, going from one holy shrine to the other in a state of remorse and regret. He was mentally distraught about having lost his wife and seeking revenge for her death. The day he died, he was found lying by his wife's grave site in Acapulco. In his hands, he had the small miniature portrait of his wife, Solina.

Chapter 12

The Voyage from Manila to Acapulco

The timing for the departure of the Manila galleons was crucial. The chief pilot took into consideration the fact that the weather in the Philippines was influenced by two monsoons which entered the archipelago every year. The first monsoon was the northeast monsoon, which affected the climatic conditions of the country, from late September to October and continued until the following April. This monsoon pelted the country with rainy weather and strong squall like winds. As a result, the months of October to December, were deemed the least preferable for the galleons to sail to Mexico. By June the effects of the southwest monsoon brought rainy weather and strong winds to the country. These winds blew from south-southwest and were considered not as severe as the northeast monsoon. As a result, this was the most suitable time of the year for the galleon to sail to Acapulco.

The south-southwest winds enabled the galleon to maneuver through the waters between Cavite and the San Bernardino Strait which led to the Pacific. It also allowed for the smooth sailing of the ship in a northerly direction after leaving the strait. To the Spaniards, the winds of the southwest monsoon were known as the “vendavals” or gales. The typhoons, on the other hand, were called “baguios,” and were basically the equivalent of the Atlantic hurricanes. Generally, the typhoons emerged from the Pacific during the months of June to December, but it was always difficult to predict when and where they would strike the country. In any case, the pilots determined their sailing schedules according to the southwest monsoon winds and tried to avoid the onset of a typhoon. As a result of the weather patterns affecting the country, the Manila galleon usually sailed to Acapulco on the last day in June, and at the latest by July 15, although some vessels were delayed in their departure and embarked from Cavite in August or September. A later sailing date meant that the ship might be caught up in a disastrous typhoon, so an early departure was always preferable.

The course the ship was to follow was already charted by the chief pilot, while the captain and the ship’s master were both informed of the direction the vessel was to follow according to the prevailing weather conditions they encountered along the way. Given this time schedule, the galleon was expected to arrive in Acapulco about December of the same year or in early January of the following year, if there were no difficulties encountered in the voyage due to the

weather or some other incident.

In order to control the departure date of the galleons from the port of Cavite, Spain issued a number of royal decrees in 1618, 1620 and 1624 regarding this topic. The vessels were required to sail from the Philippines by the end of June. The order was changed in 1773, whereupon the galleon was permitted to depart by early July. According to this new schedule, the galleon was expected to arrive in Acapulco by the end of the year. When the galleon made its return journey to Manila from Acapulco, it usually departed from Mexico in March. The voyage from Mexico to the Philippines took three months to complete.

After all the preparations had been completed at the port of Cavite, with officers and crew in their designated posts, passengers settled in their accommodations and the cargo, provisions, supplies and equipment having been loaded onto the vessel, the galleon was ready to sail. The mooring ropes were released from the dock as sailors, using the capstan and heavy cables, began raising the ship's massive anchors. Other sailors and the younger apprentices climbed up to the main, fore and mizzen masts where they awaited orders to begin unfurling the sails.

"Their labor was directed by the officers from a covered area on the poop deck, where the pilot or the master paced about, giving orders. The sailors scurried around the upper decks, fastening or loosening ropes and sheets, climbing to the yards by the shrouds, hoisting sails, or tightening rigging. Because men doing these jobs had to move rapidly from the forecastle to the aft castle – it was common to suspend between these two elevated parts of the ship some passageways, formed at the base by a network of wood or well-tightened cords (the jareta or harpings). These passageways bypassed the intermediate zone of the main deck, which therefore appeared as if it were sunken (hence its name, the 'pozo,' or 'well' of the ship) between the elevations of poop deck and prow. As shown in some of the extant engravings of shipboard work, the harpings were the place where the sailors carried out most of their work. Garcia de Palacio himself confirms this when he says that it was the part of the ship 'from which the sailors set the sails and work them, and beneath it are the passengers or the soldiers.' "[137]

But before the galleon could actually begin its journey to Acapulco, it sailed as closely as possible to the walled city of Manila. When the ship neared the city, it was saluted by cannon gun fire from Fort Santiago. A ceremony was held atop the walls as everyone present there could see the ship in the bay. The priests blessed the vessel and offered prayers for the galleon's safe journey and for all who sailed upon her. They continued their prayers in the churches of the city

until word was received that the galleon had departed from the archipelago, and had begun its journey across the Pacific.

According to Le Gentil, the blessing service for the galleon occurred in this way, “For this ceremony an image of the Holy Virgin is taken from the chapel of Santo Tomas and is carried by the priests in procession along the top of the city wall facing the galleon. She is then given the benediction of the Virgin, after which the galleon pulls up her anchor and departs. Prayers are offered in all the churches for the prosperity of the voyage, and principally that she may successfully make her way out of the labyrinth of islands. These prayers are continued until news is received that the galleon has safely emerged into the open South Sea.”[138]

Sailing to the San Bernardino Strait, California and Mexico

At the end of the ceremony, the galleon turned around and headed towards the mouth of Manila Bay. The ship sailed through one of the two passages (bocas) leading out of the bay. It passed by the island of Corregidor and the part of Luzon known as Mariveles. The ship then sailed south-southwest passing the very small island of Fortune. From there it continued east passing the island of Lubang and entering the Verde Island Passage, which lies between the islands of Mindoro, Maricaban and Verde Island, which are located off the coast of Luzon’s region of Batangas. It then passed by the island of Marinduque to the north and Suban Point, and a bay located there where it could anchor if necessary for provisions or repairs to the ship.

From there, the galleon sailed the open waters of Sibuyan Sea and east towards the islands of Burias and Masbate. Here, the ship turned east north-east towards Ticao Island. Once it reached Ticao, it anchored at the port of San Jacinto, taking on fresh water and provisions. From San Jacinto the galleon sailed in a northeasterly direction passing the islands of Naranjo and Capul to the right and Calantaan Island to the left. These islands are located near the entrance to the San Bernardino Strait. The ship continued through the strait with Sorsogon on its port side and the island of Samar on its starboard side. It then passed through the strait to the open ocean. The passage through the strait was often difficult for the galleons to maneuver, as they had to pass through a body of water beset by many cross currents and churning waves. This part of the journey often tested the chief pilot’s capabilities.

The journey from Cavite to the San Bernardino Strait, normally took about two months to complete due to difficulties encountered with dangerously strong winds, treacherous currents and a sea filled with many hazards such as reefs and shoals, which had to be avoided. Once the galleon was out in the open ocean, the journey from the San Bernardino Strait to Acapulco took approximately another four

months although this depended on the weather conditions the ship encountered during the voyage.

Having reached the ocean, the winds of the southwest monsoon carried the ship to the Kuroshio Current, which begins off the coast of Taiwan, and flows in a northeasterly direction towards Hokkaido, Japan. From Japan the current merges with the North Pacific Current at 40 to 50 degrees latitude, which flows across the Pacific towards California. By the mid-eighteenth century the route was altered and the galleons did not sail to 40 and 50 degrees latitude, but sailed to 32 and 34 degrees latitude. Following this new course they were still able to pick up the Kuroshio and the North Pacific Currents, which took them to the northern coast of Baja California.

Using the 40 to 50 degrees northern route to California, three important activities took place on the ship as the vessel approached land. Firstly, the chief pilot scanned the ocean for familiar landmarks such as the headland of Cape Mendocino in northern California. Secondly, he looked for signs or “senas” indicating that the ship was approaching land. These included birds, seals and a large type of kelp, which to the Spaniards, seemed very unusual and they called them “porras” or leeks. They resembled a type of sea grass with long roots. The kelp (laminariales) is actually part of the giant kelp forests found off of California and forms an ecosystem where many marine animals and organisms live. They have bulbs which are gas filled “pneumatocyst” and enable the plant to remain buoyant in the sea water. Within the leaves of the kelp were fish known to the Spaniards as “lobillos.” As the pilots became more familiar with the waters of northern California, it became customary for them to steer southeast from some point in the zone of the senas. Thirdly, the captain ordered that the crew and the passengers were each to receive a musket with which to defend themselves and the vessel from an enemy attack. If the ship came under attack, it was most likely to happen as it sailed along the coasts of northern California (Alta California) down to Baja California and Acapulco.

It should be noted that while the ship remained in sight of California, the pilots tried to stay as far away as possible from its coastline. They were worried that the galleon could be wrecked along the coast which was riddled with small islands, shoals, sandbanks, rocks and was continuously clouded in fog. The pilots were clearly wary of all of these hazards and rather than being caught up in a disaster near to the shore, they continued on their voyage to Acapulco. Hence, the ship did not actually venture closer to shore unless it was absolutely necessary.

When the galleon arrived in the vicinity of Mendocino, California, the galleon turned southward following the coasts and heading

towards Capo San Lucas in Baja California. From there, the ship continued sailing across the Gulf of California to the Mexican coast and Cape Corrientes. When the ship reached the coastal area of Navidad, which was located just north of Acapulco, the captain normally anchored and took on fresh water and provisions. It was also an opportunity to send by courier important documents to the government in Mexico City, as well as setting on shore the sick individuals from the ship who were cared for at a local Spanish mission.

The Northern Route to Luzon's Cape Bojeador

Several members of the Spanish government in Manila suggested that a shorter alternative route to Acapulco might decrease the sailing time to Mexico. Instead of adhering to the traditional route of sailing from Cavite to the San Bernardino Strait, which could take up to two months to complete, it was proposed that a northern route along Luzon's coast to Cape Bojeador, might be an alternative. As the winds of the southwest monsoon would have propelled the vessel in a northerly direction all the way to the Balintang Channel, above the Babuyan Islands, the galleon could easily pick up the Kuroshio Current off the coast of Taiwan and the North Pacific Current to California.

In fact, the decision to find an alternative route, rather than sailing through the maze of islands between Cavite and the San Bernardino Strait where so many ships were lost due to horrific weather and dangerous currents, was already under discussion by 1613. In that year, Philip III asked Hernando de los Rios Coronel, who was based in Manila, to find a shorter route to New Spain from Cavite. He had suggested the route to Cape Bojeador and claimed, that if the galleon sailed by mid-June, the ship would arrive in Acapulco after only about two and a half months. But, we know that after the vessel departed from the Philippines, it normally took about four months for it to reach Acapulco. The Cape Bojeador route would only have cut the time traveled to the San Bernardino Strait from two months to possibly one week if the weather cooperated.

The route to Cape Bojeador was indeed shorter, but the pilots were accustomed to sailing to the San Bernardino Strait, and it was difficult changing old habits. As a result, the discussions about an alternative route accomplished very little. In 1734, Philip V called for a renewed study of the Cape Bojeador route. Still, nothing happened until 1754, when Governor Francisco Jose Obando (1746-1754), ordered that the galleons should sail along the new route. But it was only in 1762, that a movement, led by the prestigious members of the Spanish community in Manila and pilots, approved the new route. One of the pilots in favor of the alternative route was Philip Thompson, an Englishman who was living in Manila. The fact that he was a resident

of the capital meant that he had become a Spanish citizen who, no doubt, had converted to Catholicism in order to remain in any of Spain's colonies.

As an ensign on the galleons and a chief pilot, Thompson was considered a highly experienced navigator. He was so convinced that the Cape Bojeador route was the only logical route to use, that he wrote a letter to Charles III, in which he explained how practical the new route would be for the navigation of the galleons. Part of his argument consisted of informing the king that as a result of employing the older, more dangerous route to the San Bernardino Strait, thirty galleons had already been lost. He also stated that a French vessel had arrived in the Philippines and when it sailed along the new route, it crossed the Pacific to Baja California in only 51 days. But after the loss in 1782 of the *San Pedro*, all interest in the northern route evaporated. The vessel used the northern route only to be destroyed in the process.

Le Gentil commented on the northern route saying, "The vessel might take a much shorter route after she leaves Manila Bay by going to the north instead of the South, and doubling Cape Bojeador (Ilocos Norte). If this course were taken the vessel would be able to enter the open sea much sooner. This route was tried during the last century (in the seventeenth century), but the Spaniards have now gone back to the old one. Nevertheless, in recent years, I have had letters from Manila which contain the statement that one galleon had been given orders to follow that new route, but I do not know with what result. The galleon returns to Manila in July. It follows the same route in coming into Manila Bay that is to say, it sights land near Cape Espiritu Santo (in Samar) and follows a route through the islands. It could not come back by way of Cape Bojeador, because the west monsoon is at that time blowing in full force."[139]

Spanish Settlements in California

A major topic of conversation, at the offices of the viceroyalty in New Spain, was the establishment of settlements in California. When Viceroy Gaspar de Zuniga Acevedo y Fonseca, Fifth Count of Monterey (1595-1603), governed the Spanish possessions in New Spain, he was a major proponent for the founding of new settlements in Northern California. His plan included sending Sebastian Vizcaino (1548-1624), who was an experienced navigator and galleon commander to survey the Californian coast. Vizcaino, who was born in Extremadura, Spain, wore many hats during his lifetime - serving as a soldier, businessman, diplomat and explorer.

In 1596, Vizcaino was in command of a fleet of three vessels that sailed to California to explore the coastal areas. When he arrived in La Paz, Baja California, he tried setting up a settlement there, but was prevented from doing so as he lacked provisions. Moreover, his crew

began complaining that they wanted to return to Acapulco. Later, in 1601, Viceroy Zuniga put a plan into motion to map areas in California, which could serve as suitable and safe harbors for Spanish settlements and way stations for the returning galleons from Manila. Again, Vizcaino was put in charge of the project as he was already familiar with the coasts of California.

Actually the first explorer of the Californian coasts was not a Spaniard, but a Portuguese named Juan Rodriguez Cabrillo (1499-1543). When he journeyed to California on an exploratory mission, he had been employed by the Spanish government in Mexico City. As a fellow conquistador, he had originally arrived in Mexico with Hernan Cortes and became very wealthy in the Americas as a gold miner in Guatemala. Viceroy Antonio de Mendoza, Marquis of Mondejar/Count of Tendilla (1535-1550), commissioned Cabrillo to explore the Californian coast and determine if there were any possibilities of conducting trade in those territories.

On June 27, 1542, Cabrillo sailed with three vessels from Mexico's port of Navidad. The ships in his expedition included the *San Salvador*, his flagship of 200 tons; *La Victoria* of 100 tons, and the *San Miguel*, a 26 oared brigantine. On September 28, 1542, the vessels sailed into the area presently known as San Diego Bay, which he named San Miguel. From there, he sailed north to Santa Catalina (originally named San Salvador in honor of his flagship), reaching the island by October 7, 1542. On October 8, 1542, he arrived at San Pedro Bay, and the day after that at Santa Monica Bay. He continued sailing north passing the San Francisco Bay area. On his return journey, he came to Monterey Bay and named it "Bahia de los Pinos" (Bay of the Pine trees). He returned to Santa Catalina Island to make repairs to the ships. While there, he fell down and injured his knee. The wound turned septic and he died on January 3, 1543. After he was buried at Santa Catalina Island, the fleet returned to the port of Navidad.

On Vizcaino's second journey to California on May 5, 1602, he embarked from Acapulco with three vessels: his flagship the *San Diego*; the *San Tomas* and the *Tres Reyes*. Probably due to weather and prevailing winds at the time, the *Tres Reyes*, which was commanded by Martin d'Aguilar, became separated from the other two vessels. The ship, however, went on to explore the coast of Oregon and reported its discoveries to the viceroyalty in New Spain. By November 10, 1602, Vizcaino reached the bay of San Diego. Continuing north from the bay, he sailed to Point Lobos, Santa Catalina Island and Monterey Bay. After his return to Mexico, there was enthusiastic support for the establishment of a settlement at Monterey Bay, but this was postponed for 167 years.

After Viceroy Gaspar de Zuniga left Mexico for his appointment as

viceroy in Lima, Peru, his successor Viceroy Juan de Mendoza y Luna, Marquis of Montesclaros (1603-1607), did not share his enthusiasm for the establishment of a settlement on Monterey Bay. Consequently, the plans for colonial expansion to the area were deferred. The main purpose of having the settlements in California would have been to serve as stopping off points for the incoming galleons from Manila. When they anchored at the settlements, they could take on fresh water and provisions and attend to the sick individuals on the ship, before continuing the voyage to Acapulco.

While all these plans were under discussion in Mexico City, the matter was also a topic of concern in Madrid. In 1606, Philip III, acting on proposals which had been submitted to him by the Council of the Indies in Seville, issued a royal order in which the viceroy was instructed to go ahead and establish settlements along the Californian coast. However, the royal order did not arrive in Mexico City until April 11, 1607, five years after Vizcaino's last exploratory mission to California.

When Viceroy Juan de Mendoza y Luna, received the king's royal order, he decided to postpone the establishment of the settlements for the time being. The only concession he made was to declare that of all the areas in California which were suited for a possible future settlement, Monterey Bay seemed the most qualified to cater to the needs of the Manila galleons. He mentioned that when the galleon sighted the California coast, the only thing that all those on board the vessel could think of was to continue the journey to Acapulco, without making any stops along the way. In any case, he also suggested that a settlement should be established in the mythical Pacific islands of Rico de Oro and Rica de Plata, even though he realized that no one had actually located their whereabouts. All he knew about the islands was that they were presumably nearer to Japan than anywhere else.

The Spanish mariners who traveled across the ocean believed that there existed somewhere in the north Pacific two vastly rich mythological islands. They were never able to find the islands, even though they were convinced that they existed. They named the islands Rico de Oro or island of gold, and Rica de Plata, the silver island. How the myths concerning these two islands began is a mystery. They may have originated with ancient geographers such as Pliny and Ptolemy. The ongoing search for the islands was probably due to the wealth associated with their names, and the hunger for gold by the early conquistadores.

Even though the Spanish government in Mexico City had allocated 20,000 pesos for the establishment of settlements in California, the funds were diverted to explore the Pacific and the search of the legendary islands. It was thought at the time, that the islands could be

used as a way station for the galleons from Manila, where they could be repaired and take on provisions for the rest of the journey. Vizcaino was sent to seek out the islands in 1608, but after relentlessly searching for them, he declared, “There are no such islands in the whole world.”[140]

By 1741, a royal decision was rendered which stated that the search for the islands was basically pointless. As far back as the early seventeenth century, the Spaniards had been searching for the mythical islands. The Spaniards were never able to find them. They had no clue as to their location or even if they did indeed existed. It is possible that what they thought of as the islands of gold and silver were actually the Hawaiian Islands. Finding the elusive islands was still a mystery in the Philippines during Governor Simon de Anda’s term of office from 1770 to 1776. According to Anda, no one had ever seen the islands nor were they able to find them. However, unknown to the governor, there were some individuals who claimed that they had actually seen the islands, but their attempts to find them again proved futile.

In any case, the process of Spain’s influence into California began to take shape in the late seventeenth century. The first Jesuit mission was established in Baja California in 1697. The religious order would go on to establish another twenty-two missions in California over a period of 72 years. In 1720, another mission was established in La Paz, Baja California. Then in 1767, Gaspar de Portola y Rovira (1716-1786) was appointed as governor of Baja and Alta California. He governed the area until 1770. As a professional military officer and explorer, he was recognized as being the founder of the cities of San Diego and Monterey. When Charles III issued a royal order stating that Jesuits were no longer allowed to proselytize in any of Spain’s possessions, it was Gaspar de Portola who enforced the measure in California. The Jesuits were suppressed in Catholic countries by a decree issued by Pope Clement XIV in July 1773. The Jesuits were arrested and returned to Spain. It was thought at the time, that the Jesuits had enriched themselves through their religious activities worldwide, including in the Philippines where they were also ousted from the country

By the mid-eighteenth century, the Spanish government was eager to establish settlements throughout California as they worried that the territories might be claimed by other European countries such as England, as it had already established colonies on the east coast of North America. The urgency to establish colonies along the Pacific coast led to the setting up of settlements in San Diego and Monterey.

On July 16, 1769, the first Catholic Church was established in San Diego. It was known as the “Mission Basilica San Diego de Alcala,”

and it was founded by the Franciscans through the work of Father Junipero Serra, a native of Majorca, Spain. The founding of this church led to the establishment of Franciscan missions throughout California. Through the mission churches, the Spaniards had begun to take a firmer hold of the territories in California. By 1776, the cities and ports of San Diego, Monterrey and San Francisco, were all connected by mission churches, which were able to provide safe harbors for the galleons.

The Hawaiian Islands

The Spanish navigators of the eighteenth century became aware of the existence of the Hawaiian Islands through the 1778 expedition conducted by the British naval commander, Captain James Cook. After news of his expedition to the Hawaiian Islands arrived in Europe, it quickly spread to Spain where Spanish geographers and pilots noted the discoveries on their maps and sea charts. Captain Cook was the first European to establish communications with the Polynesians of the big island of Hawaii. When he discovered the islands he named them the "Sandwich Islands" in honor of Sir John Montagu (1718-1792), the fourth Earl of Sandwich.

It is not clear if the Spaniards had known about the Hawaiian Islands before Captain Cooks' exploratory voyages. The Spaniards had been sailing across the Pacific since 1521, so it seems likely that they knew of these islands and their location. However, as they were located too far north of the route employed by the galleons which sailed from Acapulco to Manila, there may not have been any reason or effort made to explore them. If they had shown an interest in the islands, it would have meant taking the galleon off its traditional course to the Philippines. Of course, the islands could have served as a way station for the ships where they could take on fresh water and provisions before sailing on to Guam. However, this would have entailed spending large sums of money to set up a post there with soldiers and Spaniards to manage the settlement. In the end, it may have been just too costly to contemplate. Until Captain Cook's expeditions to the Hawaiian Islands, the Spaniards were unaware of the Polynesian names for the islands and knew nothing about the people living there.

Gemelli Careri's Journey to Acapulco from Manila in 1696

One of the few eyewitness accounts of the voyage from Manila to Acapulco has been provided by Gemelli Careri (1651-1725). He sailed from the capital aboard the *San Jose* on June 29, 1696. His description of the day-to-day activities aboard the vessel enables us to visualize what it must have been like to travel on the cramped, smelly vessel during the six to seven month journey across the Pacific. Moreover,

his precise notations of the navigational position of the ship during the voyage, also provides an insight into how the ship was piloted.

To Careri, the journey was both hazardous and tortuous. Another traveler, Le Gentil, also wrote of the journey in the eighteenth century and said that, “The voyage from the Philippine islands to America (Mexico) may be called the longest and most dreadful of any in the world … because of the vast ocean to be crossed, being almost one half of the globe, with the wind always ahead …and the terrible tempest that happens there, one upon the back of another. And for the desperate diseases that seize people in seven or eight months, lying at sea, sometimes cold, sometimes temperate, and sometimes hot, which is enough to destroy a man of steel, much more flesh and blood, which at sea had but indifferent food.”[141]

Careri was born in Radicena, Calabria, Italy in 1651 and was by profession a lawyer. From 1685 to 1687, he traveled to France, Germany, and Hungary. In 1693, he ventured further and traveled the world arriving in Egypt and then on to Palestine (the Holy Land), Constantinople (Istanbul), Armenia, Persia (Iran), India, China, Macau and finally the Philippines. As a traveler and adventurer, he was probably one of few wealthy Europeans who were able to tour the world for his own personal pleasure. As he stayed in Manila for two months, he was able to write about his experiences in the archipelago and of his journey to Mexico. The following is his detailed account of the voyage. [142]

“The ship (the galleon *San Jose*) being again laden, and about a thousand jars of water put in by the commander and other officers, we set sail on Friday 29 (June 1696) before noon in the presence of the colonel (Tomas de Andaya). Having sailed 2 leagues, we came to an anchor within the same bay (Manila Bay). On pretense that he wanted water, the commander left behind a Dominican, who had given him 500 pieces of eight for his voyage - a Recollect and a physician he had agreed to keep at his own table, which accident put me into a good little cabin for my bed and equipage. Saturday the last day of June, the wind continuing south against us, though we had hoisted sail, we soon dropped anchor again. The same we did on Sunday the first of July, having sailed but half a league.”

“Monday 2nd the wind stirred not, and Tuesday just weighed and dropped anchor again, the wind continuing contrary both days with much rain, so that in five days, we scarcely sailed three leagues. Some water being spent, the boat was sent to take in more, near the hill of Bataan. Being curious, I went in the boat with Major Vicente Arambolo, a Biscayan, and landed on a plain, where the arrows of many natives who were hunting in the woods, could not reach us. Having taken the water, we returned aboard after midnight.

Wednesday 4th, we stirred not, the wind being contrary. Thursday 5th, before day, drove along with the tide, and very little wind, but the wind then starting up against us, came to an anchor near Mariveles (bordering Manila Bay). The governor came aboard in a little parao, which is a tree hallowed out, with two wings on the sides, to prevent its oversetting, to bring our captain some fruits, and then went away. Friday 6th, the same wind continued with those rains, which never fail about Manila. Saturday 7th, the wind refreshing, and the rain growing tempestuous, we weighed anchor, and brought the ship under the shelter of the hill of Bataan (still in Manila Bay). The same southerly winds and rains continuing, we lay in the same place, all Sunday and Monday the 8th and 9th. Tuesday 10th, we were towed a little way. Nothing troubled me but the heat, for there was none of the other plague of lice, so frequent in other ships, because as has been said, in those parts they do not breed on Europeans."

At this point, Careri described how a search was conducted on the vessel for contraband goods. When these goods were located packaged in water jars, they were thrown overboard as they had not been listed in the ship's register.

"A search was then made to discover whether there were any jars, which instead of water were filled with commodities, upon pretense of carrying them safer and several were cast into the sea full of pepper, porcelain and other goods of value. The south wind ceasing and the north succeeding, we weighed anchor Wednesday the 11th, before day, and moved with the tide with little wind, between Mariveles and the hill of Bataan, so that by sunset we passed the point of Maragondon and Limbones, and then the rock of Fortune (Fortune Island)."

"Thursday (July) 12th about noon, we left at stern and the desert island of Ambil, and that next to it of Lubang - between which and the point of Calavite in the island of Mindoro, passed the so often mentioned galleon, St. Joseph (also known as the galleon the *San Jose* which was wrecked off the island of Lupang, Mindoro on July 3, 1694) as it was running to perdition. Before sunset, we passed by Point St. James, in the island of Manila (island of Luzon) and passed the Balayan Bay of Batangas)."

"Friday 13th, we coasted the island of Mindoro, where it forms a long ridge of high mountains, and two sides of its triangle beside a long high neck of land running out toward the south. This island is mostly inhabited by (natives) Mangyans, not yet subdued. The wind rising, and against us, opposite to the island of Maricaban, a place near Manila (island of Luzon), where there are plenty of buffaloes and deer - it was thought fit to lie by night here, since we could not advance, but the weather growing stormy about midnight, we lost all we had gained, and on Saturday 14th, found ourselves opposite to

Cape St. James and got but little from it all the day after. The worst was the coast afforded no good anchoring and we had no shelter from the wind. Sunday 15th, the violence of the contrary wind abating, we coasted along to weather the cape. First we left on the right hand, a little bay near to the cape, then another larger, called El Varadero Viejo, and then the strait between the aforementioned point of Mindoro and the island of Maricaban, near the bay of Baguan, on the land of Manila, where are the garrisons of Guarnio, Blaxivo, and Batangas. Turning the cape, we came to the Varadero."

"All the ships that go to Acapulco put into this port, to take in wood and water. It is a semicircular bay, formed by a crooked neck of land, running out of Mindoro and other islands opposite to it. (At this point they were travelling through the Verde Island Passage with Luzon to the north and Mindoro to the south.) The greatest danger in this narrow passage is caused by the contrary currents, which here we met, one of them running toward Mariveles and the other toward the Strait of San Bernardino. After dinner I went ashore to hunt. I could not get into the woods by reason of the thickness of the trees and went aboard again empty handed. Having taken aboard 200 jars of water brought to us by the king's galliot (galley), which expected us there for that purpose, we set sail on Monday 16th, with a fresh gale at south. We left on our right hand near the coast of Mindoro seven little islands named after Bacchus, pleasant to behold for their green trees, but not inhabited, and on the left Cape Galvan of the land of Manila (island of Luzon). At sunset we sailed among the Colonel Islands near the two islands called Las Hermanas or sisters, and then by three others, called Virreys (Viceroy Islands), all full of trees, but uninhabited."

"Tuesday 17th, before day, we passed between the islands of Banton and the point of Marinduque, which was on our left. This island abounds in fruits and very nourishing roots and also in wild boars, deer, buffaloes and other creatures and therefore we sent the chiampan (sampan) thither before us to get fresh provisions. Near the point of Marinduque is a small island, like that of Banton, called Botonsillo, or little button, behind which another is called Simara, inhabited by civilized Indians (Filipinos). As we sailed east, we saw at a great distance on the right of the islands of Romblon, Tablas and Sibuyan, all inhabited - for all the way from Manila to the Embocadero (San Bernardino Strait), mouth of the strait is a labyrinth of islands, 80 leagues in length, and very dangerous. Wednesday 18th, we were becalmed (no wind), but Thursday 19th, had a little wind that carried us as far as the island of Sibuyan."

"Friday 20th, it freshened, and about sunset we got through the strait made by the islands of Burias and Masbate, where there are rich

gold mines and the strange birds called tavonos and then by Ticao (Island), all of them inhabited by Indians not yet subdued and very fruitful. Having coasted along the island of Ticao all night, on Saturday 21st, in the morning, two hours after sunrise, we came to an anchor in the port of San Jacinto, opposite to Sorsogon. The alcalde-mayor or chief magistrate of Albay came aboard on Sunday 22nd, and brought the captain a present of 20 hogs, 500 hens, and a great deal of fruit."

"Monday 23rd, the chiampan (sampan) came from Marinduque loaded with refreshments given to them by the Jesuits of that parish for the Fathers John Grigoyen, Antony Borgia and Peter Anthony Martinez, who were aboard with us bound for New Spain (Mexico) - one to stay there, the other to go to Rome for the affairs of the mission. The wind coming up very fair for us to put into the bay of Ticao, we weighed anchor on Tuesday 24th, early, and advancing a little with the stream, came to an anchor in it. A barefoot father of St. Augustine, who belonged to that province, came to bring us some refreshment of fruits. Going ashore after dinner to bathe, I was informed that the village was formerly near the shore, but having been burnt by the pilot of a ship that put in there, the Indians retired half a league up the land into the middle of the wood (forest). There are about thirty wooden houses covered with palm-tree leaves, and the church and dwellings of the missioners is of the same sort. But these are for most part of the year at Masbate, because the Indians go away into the mountains to plant camotes (yams) and guavas, and only come to that place when the fathers go to make their visitation."

While the galleon was still in the area of Ticao Island, the master made sure that everyone on the ship had received a license from the Spanish government in Manila to sail on the vessel. Those found without licenses were put ashore. Additional water was taken onto the ship and a disagreement arose amongst the three pilots of the ship. It is interesting to note that the vessel carried live animals of pigs and chickens, as well as so many fruits and vegetables on the main deck that Careri said that the vessel resembled a moving "garden." The reference to "bombones of cana" were actually hollowed out large pieces of bamboo which were filled with water. The natives carried liquids in these containers, and the Spaniards likewise, adopted this method for their own use.

"Wednesday 25th, being St. James Day, the wind being contrary - we lay at anchor because the ship stood in need of a strong south wind to carry it out of the strait against the current. Thursday 26th, a muster was made to see if any man was aboard without license for which they pay twenty pieces of eight to the king. Sixteen persons who had none were put ashore, only 200 remaining aboard. Friday 27th, 500

bombones of cane full of water were brought aboard, which the alcalde had caused to be cut by the captain's order. They were 8 spans in length and as thick as a man's thigh. The same day a fresh gale starting up to the south, we weighed anchor to sail, but soon dropped it again. The chief pilot and his two mates disagreeing, the first being of the opinion there was not wind enough. Saturday 28th, it came about to north and has hindered our sailing. It was pleasant to see the ship like a floating garden with such abundance of fruits and greens brought from the neighboring parts, as also swine and hens, in their caracoas or boats, sewn with Indian cane, which have a sail made of mat, triangular and fastened to two poles and long canes (bamboos) on the sides to prevent over setting (overturning). Sunday 29th, the same wind continued, but at night was dead calm, which lasted Monday 30th, and on Tuesday 31st, the contrary north wind came up again."

By this time, the galleon was still attempting to reach the San Bernardino Strait after having departed from Cavite a month earlier. As they continued to sail to the strait, the commander of the *San Jose* received news of the arrival of the galleon from Acapulco the *Rosario*. The ship was anchored at the port of Palapag on the island of Samar. The vessel was in a damaged state and rather than attempting to pass through the strait, smaller vessels were ferrying passengers and cargo to Cavite. This particular ship also brought to Manila the annual silver subsidy from Mexico City for the Philippine government's expenses. Another interesting point to note is that once the galleon had anchored in a port such as Palapag, according to government regulations it could not leave that port without receiving new instructions from the governor of the Philippines. Apparently, this was the procedure at the time for departing or arriving galleons.

On the *San Jose*, a disagreement arose between one of the pilot's assistants and a passenger who complained of the poor quality of the food he was served on the ship. The two men came to blows, each one striking the other. The captain had to intervene in the dispute which ended with both men being punished. This is perhaps an indication of how difficult it must have been for so many people to co-exist with each other in a cramped environment such as a galleon where space was limited and customs and personalities clashed. Disputes and disagreements must have been more the norm, than not, with tempers short at times given the living conditions they had to endure.

"Wednesday, the first of August, some boats brought advice of the safe arrival of the galleon, *Rosario* from New Spain. It has cast anchor for fear of the Embocadero, or mouth of the channel, at the port of Palapag in the island of Samar, and there was landed the money (the subsidy). Thence some boats had towed her to the nearest coast of

that island and to the port. It is unlawful to put to sea again without fresh orders. The same contrary wind kept us there till Thursday 2nd. On Friday 3rd, we sailed with something of a wind, which was soon coming about, we returned to the port, where the festival of St. Dominic was celebrated on Saturday 4th. On Sunday 5th, the wind blew so hard at north, that we were forced to drop another anchor. The same continuing on Monday 6th, we diverted the tedious hours with cockfighting, there being abundance aboard, which was not pleasing to me because we eat no other meat."

"Tuesday 7th, the chiampan went for water. Wednesday 8th, the pilot's mate had some words with a passenger he carried over on his own account, who is complaining that his table was too poor. The other (man) struck him on the face, and then ran after him with a knife. The captain designing to inquire into the matter, had me assisting him, but all the punishment ended in causing them both to stand some hours in the bilboes. Thursday 9th, after midnight the wind blew fresh southeast, so that about noon the pilot thought fit to sail, because there is no getting out at the Embocadero, or mouth of the channel, where the currents are always impotent, without a wind that is stronger than they. The Embocadero or strait is 8 leagues in length and 4 or 5 and in some places over 6 over. It is enclosed like the court or yard of a house, on the one side with the coast of the island of Manila (Luzon) - by the islands of Burias, Ticao, and Masbate - by the six little islands de los Naranjos, or of orange trees, which are desert - by the fruitful island of Capul - by the Alupores, and lastly by the west coast of Palapal, and on the other by the island of Maripipu, inhabited by Talaxians, Tagapola, Mongol, Kamanda, and Limbanquayan, which all together render the passage out towards New Spain very difficult, what way so ever man would go."

The galleon finally managed to pass through the San Bernardino Strait on Friday, August 10th. The ship's anchors were secured when they passed through the strait. The small boat they had been using to ferry provisions to them from the islands was set adrift, as they no longer needed it. But they still had another small boat that was stowed in the hold in pieces, and which could be reassembled easily by the carpenters if necessary.

"The wind holding brisk at southwest, the pilots all agreed to make their way out of the strait and accordingly about noon weighing the two anchors, the tide being then with us, they hoisted sail and before sunset were near the mouth of the strait. As we were upon getting out, there fell such violent storms of rain, that together with the contrary current, whilst the moon was above the horizon, we could not, though the wind blew hard for us, advance one step, but rather lost ground, so that we were all night in great danger. I was astonished, and

trembled to see the sea have a motion like water boiling over a hot fire, understanding that several ships, notwithstanding the help of their rudder had been by violence of the current whirled about and at last wrecked."

"Friday (August) 10th, the tide turning for us, we got out of the strait before noon. First, we passed near the coast of the island of Manila the mountain of Bulusan, where is the burning eruption of Albay, and the rock of St. Bernardino (San Bernardino Strait), in 13 degrees of north latitude, leaving them on our left, and about sunset we had Cape Espiritu Santo (Holy Ghost), on our right, this being the most easterly point of the coast of Palapag (Samar), and the first the galleons discover, coming from New Spain. It lies in 12 degrees, and 30 minutes of north latitude. Being come into the open sea, to our great satisfaction, our cables were coiled between decks, as we being to cast anchor no more till we came into New Spain, and the boat was set adrift that it might be of no hindrance, because we had another in case of need, as the Spaniards call it, in quarters, that is in pieces to clap together."

"The southwest wind blew hard all night, and the sea being rough made many sick. Saturday 11th, the wind continued at southwest and taking an observation we found ourselves in the latitude of 14 degrees. Those that come from New Spain to the islands sail continually upon the same parallel of 13 degrees - for sailing from Acapulco, which is in 17 to the 13 foresaid, they always run in a straight line, before the wind, on a smooth sea as if they were in a canal, without any roughness of water, so that they come in 60, or at furthest 65 days to the Marianas, and thence in 15 or 20 to the Philippines. On the contrary, those that go thence to New Spain, have a very difficult voyage, for the sea may rather be called enchanted, than boisterous, and that they may gain ground and not be driven back as often happens they are forced to run away to the northward, even to 40 or 41 degrees of latitude, sometimes coming in sight of Japan, that they may afterwards fall off till they meet the signs (birds and kelp), the sea of California carries some hundreds of leagues and so continue their voyage with the common winds that are more favorable. The pilot proposed to pass by the islands of the Ladrones (the Marianas), at 19 degrees and 20 minutes of north latitude (whereas the general method is to pass them between 20 and 25) that he might from thence gain the greater latitude, this having been found by experience to be the best course, and therefore he directed his course east northeast."

During the voyage of the *San Jose* the pilots conducted daily observations in order to determine where the vessel was located on their charts. As the vessel neared the area of the Ladrones

(Marinanas), the wind was so strong that the pilots could not conduct their observations and ordered the lowering of the sails on the top masts. Interestingly, at this point in the voyage, warm clothing was distributed amongst the crew members. As the ship sailed further north, the men were affected by the cooler temperatures.

"Sunday 12th, the fresh gale which had continued all night fell and we were becalmed and by observation we found ourselves in the latitude of 14 degrees and 13 minutes. That day the cloth the king allows the seamen to keep them warm, was divided among them. Monday 13th, the calm continued, and an observation showed us to be latitude of 14 degrees and 20 minutes. Tuesday 14th the wind came up at northwest, and we sailed by north. Our latitude by observation is 14 degrees 34 minutes. The same wind continuing, we steered northeast on Wednesday 15th and found the latitude of 14 degrees and 45 minutes. Friday 15th (17th), a small gale turned about all the points of the compass, and we found ourselves in the same latitude. Saturday 18th, we stood east northeast; with little wind at north, northwest and the latitude was 15 degrees 1 minute. The allowance of water was cut shorter, because there was but little, and we had far to sail. At night the wind came up west, northwest which made us to lie east, and so we held on all Saturday 19th, in the latitude of 15 degrees 24 minutes as also Monday 20th, in 15 degrees 34 minutes. At night a violent wind blew which kept us all awake and beat us very heavily all Tuesday 21st. That day little rain fell and everyone made a trove greedily to gather the water. Friday 31st, the wind came about. At sunset there fell a great rain and all the thirsty sailors went out naked to gather the water, so all the empty vessels were soon filled. A great storm continued all night that there being plenty, all men dressed their rice (this means that they were able to cook their rice with rain water)."

"Saturday, the first of September, we stood east and by north the wind at southwest the latitude 18 degrees 50 minutes. Sunday 2nd, before the day the wind came about and blew hard at east, so that there was no saying Mass, nor taking an observation (by the pilots); and the pilots were obliged to lower their top-masts. Monday 3rd, the wind coming to northwest we held on our course east northeast and hoisted our top masts again. The same day the first cachorreta (a type of fish the Spaniards knew by that name) being taken, it was exposed for sale to the highest bidder, according to the custom spoken of elsewhere. The captain bid up to 60 pieces of eight, to make an offering to the Blessed Virgin of the Concepcion, but four sailors bid 5 pieces more and carried the fish. Afterwards about 20 cachorretas and bonitos were taken. These fishes are full of blood, somewhat like mackerel. The storm blew again at night with rain, so that the sailors could not get upon the deck. This weather hindered our taking any

observation the next day being Tuesday 4th, but we held on our course with the wind."

"Wednesday 5th – September The wind was at first at southwest and then at south southwest latitude 19 degrees 33 minutes. About break of day, Thursday 6th, we discovered four of the Marian Islands (Marianas), but the wind would not permit the pilot to pass them by in 19 degrees 20 minutes latitude as he had designed. When we had advanced farther we saw at a distance towards the south, the biggest of them, which is exactly shaped like a long saddle. The second bearing upon the same point was a steep round burning mountain (volcano), in the sea charts called Griga, sending out smoke from the top. They told me it was three leagues in compass, and was inhabited at the foot of the hill on the south side, to which the master's mate of the galleon added, that as he passed by at another time, a great many of those inhabitants came out in boats to bring him fish, buyo (coconuts), and excellent melons, but that they never after came to meet the galleons, because an extravagant passenger had struck one of their men."

It should be noted that the galleons, when sailing from Cavite to Acapulco, did not stop at the Marianas, but continued north to encounter the Kuroshio Current and the North Pacific Current. It was only on the return journey from Acapulco to Manila that the ship anchored at Guam to deliver missionaries and supplies there, as well as taking on provisions before continuing the journey to Manila.

Careri pointed out an unusual event which occurred with the compass's needle. It failed to point towards the North Pole. At that time, in the seventeenth century, pilots and mariners would not have been able to explain this anomaly. From the 1950s onwards, scientists discovered magnetic variations across the sea floor. The volcanic rock consisting of iron rich basalt making up the sea floor contained a powerful magnetic mineral known as magnetite, and this caused imprecise compass readings. These magnetic anomalies can be found along the undersea mid-ocean ridges, as well as near the Marianas, Cocos, Palau and the Hawaiian islands. When the Spaniards encountered the anomalies, they were unaware of the nature of the sea floor they were sailing over and the fact that its magnetic qualities could affect their compasses. Understandably, they were baffled by this occurrence.

"Friday the 7th (of September 1696), the wind being east, we stood north northeast without taking any observation. Saturday 8th, the wind at southeast stood east northeast and found 21 degrees of latitude. Sunday 9th, the same wind and course. The sky appeared in violet color, with green clouds, which I and the fathers of the Society of Jesus (Jesuits) looked upon as a prodigy, having never seen the like

before. The pilot began his devotions for obtaining a good voyage, and at night there was dancing and such sports as the ship could afford. Tuesday 11th, we were becalmed; the latitude 22 degrees 10 minutes Wednesday 12th, the wind at east southeast we stood northeast the latitude 22 degrees 37 minutes. Here it is fit to acquaint the reader that during the long voyage there is a strange variation of the needle observed, for which neither pilots nor mathematicians have assigned any reason in 180 years, that the voyage has been used. It begins at Cape St. Bernardino between 12 and 13 degrees of latitude, intensively increasing for about half the way, to 18 or 20 degrees for above a thousand leagues. There it begins to lessen till they come to Cape Mendocino, where it is observed to be two degrees. Now this variation in some places being northeast in others northwest and in some places more, in other less, it is therefore the more unaccountable. There is no pretending it is caused by the loadstones because the islands are a vast distance, and perhaps a thousand leagues. The pilots perceive this variation when the sun is setting, for marking the true west point, they then see whether the north, and other two cardinal points answer."

"Thursday 13th, the wind being southeast we stood northeast the latitude 23 degrees 30 minutes so that we got out of the torrid, into the temperate zone. That night it blew a great storm and Friday 14th, we stood north the wind east northeast. The latitude 24 degrees 12 minutes Saturday 14th the wind at east northeast we still ran due north. Towards noon, it blew so hard that the pilot was forced to lie by, backing the mainsail, and three hours night, the wind came more to northeast. Such abundance of cachorretas was taken all the day that the seamen grew weary of them, and gave them to anybody for the asking. They greedily swallowed the hook."

"Sunday 16th, the wind being at southeast we stood northeast by east the latitude 25 degrees 5 minutes. Monday, 17th, the wind south southwest ran east northeast. Tuesday 18th lay in the same course, though the wind was west. No observation could be taken either day. Four sharks were caught, and opening one of them, there were seven small ones found alive in its belly. This caused an argument, or dispute, between the Jesuits, the Dominicans and the Augustinians to decide whether this fish brought forth young or not. Some foolishly said, the old one had swallowed them, to save their lives, by vomiting them up again, and that they came from eggs laid and then kept in the opening under their jaws, as is said of other fishes, and particularly the trout. But the most received and likeliest opinion is that, that all fish bring forth hatched out of the egg or formed out of the spawn, for several persons well versed in sea affairs have told me that there have been eggs found in sharks, and young ones at the same time. That

same day there fell much rain, and the sailors went out naked, to catch the water so that they filled all the empty vessels and therefore instead of shortening the men's allowance of water after two months and a half sail, it was increased. Wednesday 19th, the wind at east we stood north northeast the latitude 25 degrees 50 minutes. We had some diversion with sharks. Thursday 20th, we were becalmed. Friday 21st the wind at southwest we lay the same course and making much way caught an abundance of cachorretas. Saturday 22nd, the wind at south we stood at northeast and by east, the latitude 27 degrees 30 minutes. Monday stood as before. Tuesday 25th, the wind blowing fresh at south southeast we steered east northeast the latitude 29 degrees 3 minutes."

"Monday the first of October, the wind continuing at east southeast we steered northeast and by north the latitude 32 degrees 28 minutes. Afterwards the wind came. A great storm blew on Tuesday 2nd. No fire could be lighted, so all ate cold meat, and there was no chocolate to be made. Wednesday, 3rd, the same wind continuing, the storm did not abate … two ducks flew by us … a sailor caught a little bird like a canary. The captain endeavored to keep it in a cage but it died the same day. Thursday 4th, the wind coming about to north, and then to north northwest we sailed east for fear of running upon Rica de Plata (a mythical island). Friday 5th, the wind blew at east and we sailed north and then north and by east the latitude 33 degrees 50 minutes. Saturday 6th, storm increasing, the two top masts were lowered and we drove with the wind. Sunday 7th we stood north and by west the wind being east, with terrible waves breaking over the poop. Monday 8th, the wind being south, we sailed northeast and by east leaving the imaginary island of Rica de Plata."

"Wednesday October 17th we were becalmed the latitude 37 degrees. At sunset the wind came up south southwest which made us steer east. The same wind coming up again Thursday 18th. Friday 19th we were becalmed, the latitude 36 degrees 10 minutes. Saturday 20th, held the same course. Sunday 21st, we had a troublesome calm but at length the wind came up at southwest and we steered east. The sight of a dove rejoiced all, taking it as a good omen of the success of the voyage, and guessing we might see land within a month. There is no doubt but this voyage had always been dangerous and dreadful. In 1575 the ship *Espiritu Santo* was cast away at Catanduanes, through ignorance of the pilot, who could not find the Embocadero (San Bernardino Strait), or mouth of the strait. In 1596, the contrary winds drove the galleon *San Felipe* as far as Japan, where it was taken by way of reprisal with all the lading designed for New Spain, which gave occasion to the Emperor Taycosama (the actual ruler at that time was Hideyoshi 1536-1598) then reigning to persecute the Christians,

wherein he proceeded so far as to put to death Fray Pedro who came from Manila with the character of ambassador, the better to exercise the function of a missioner (missionary)."

Fray Pedro Bautista 1542-1597, was a Franciscan missionary who was one of the sixteenth century Christian martyrs of Japan. He was canonized by the Vatican in 1862 and became St. Peter Baptist.

"In 1602 two other galleons were cast away and others after that. Nor is the difficulty and danger any less at present: for many galleons are lost and others having spent their masts (lost them at sea), or drove by contrary winds return (to Cavite), when they were half way over, after losing many men at sea, and the best but ill-conditioned, as happened to the galleon *Santo Cristo* not long ago."

The *Santo Cristo de Burgos* sailed from Cavite in 1693 and burned mysteriously at sea. Charred pieces of the galleon washed up along the shores of the Marianas. Two men survived the disaster and reached the island of Lampon where they related their terrifying experiences at sea. They survived the ordeal by eating the flesh of their companions and were mentally unbalanced when found.

"The wind continued to blow hard at north all night of Wednesday 24th and put us east and by north. Abundance of pigeons was seen about the ship. The captain, because of the sharpness of the weather, caused some wine of the palm tree to be distributed among the sailors, to warm their stomachs. Thursday 25th, we continued the same method of lying sometimes one way and sometimes another. Sunday 28th, the thunder and rain continued and the two top masts being hoisted again, we steered first east and by north and then east northeast the latitude 30 degrees 10 minutes. The wind grew more favorable at night, and so we sailed east northeast."

"Monday 29th, (October) the sun shone out bright to clear the hearts of the passengers, who had been so many days buried under dark fog and rain. The poor people stowed in the cabins of the galleons bound towards the land of promise of New Spain endured no less hardship than the children of Israel did, when they went from Egypt towards Palestine. There is hunger, thirst, sickness, cold, continual watching and other sufferings, besides the terrible shocks from side to side, caused by the furious beating of the waves. I may further say they endure all the plagues God sent upon Pharaoh to soften his hard heart, for if he was infected with leprosy, the galleon is never clear of a universal raging itch, as an addition to all other miseries. If the air then was filled with gnats, the ship swarms with little vermin, the Spaniards call gorgojos (weevils), bred in the biscuit, so swift that they in a short time not only run over the cabins, beds, and the very dishes the men eat on, but intensively fasten upon the body. Instead of the locusts, there are several other sorts of vermin of sundry colors

that suck the blood. An abundance of flies fell into the dishes of broth, in which there also were worms of several sorts."

"In short, if Moses miraculously converted his rod into a serpent aboard the galleon a piece of flesh, without any miracle is converted into wood, and in the shape of a serpent. I had a good share of these misfortunes, for the boatswain, with whom I had agreed for my diet, as he had fowls at his table the first days, so when we were out at sea he made me fast after the Armenian manner, having vanished from his table all wine, oil and vinegar; dressing his fish with fair water and salt. Upon flesh days he gave me tasajos fritos (fried beef jerky), that is, steaks of beef, or buffalo, dried in the sun or wind, which are so hard it is impossible to eat them, without being first well beaten, like stock fish; nor is there any digesting them without the help of a purge. At dinner another piece of that same sticky flesh was boiled, without any other sauce but its own hardness and fair water. At last he deprived me of the satisfaction of gnawing, a good biscuit, because he would spend no more of his own, but laid the king's allowance (crew's ration) on the table - in every mouthful whereof there went down an abundance of maggots, and gorgojos chewed and bruised."

"On fish days the common diet was old rank fish boiled in fair water and salt. At noon we had mongos, something like kidney beans, in which there were so many maggots, that they swam at top of the broth and quantity was so great. This bitter fare was sweetened after dinner with a little water and sugar; yet the allowance was but a small coco (coconut) shell full, which rather increased than quenched drought. Providence relieved us for a month with sharks and cachorretas the seamen caught which either boiled or broiled were some comfort. Yet he is to be pitted who has another at his table; for the tediousness of the voyage is the cause of all these hardships. It is certain, they that take this upon them, lay out thousands of pieces of eight, in making the necessary provision of flesh, fowl, fish, biscuit, rice, sweetmeats, chocolate, and other things - and the quantity is so great, that during the whole voyage, they never fail of sweetmeats at table, and chocolate twice a day, of which last the sailors and grumetes (apprentices) make as great a consumption, as the richest."

As the voyage continued, crew members became sick. Even though the ship was supplied with foods forming a special diet for the sick, it appears that this was not distributed amongst the sick sailors. According to Careri, the ship's master kept all of these provisions for his own table.

"Yet at last the tediousness of the voyage makes an end of all and the more because in a short time all the provisions grew naught, except the sweetmeats and chocolate, which are the only comfort of passengers. Abundance of poor sailors fell sick, being exposed to

continual rains, cold, and other hardships of the season - yet they were not allowed to taste of the good biscuit, rice, fowls, Spanish bread, and sweetmeats put into the custody of the master by the king's order, to be distributed among the sick; for the honest master spent all at his own table. Notwithstanding the dreadful sufferings of this prodigious voyage, yet the desire of gain prevails with many to venture through it four, six, and some ten times."

"The very sailors, though they foreswear the voyage when out at sea - yet when they come to Acapulco, for lucre of 275 pieces of eight, the king allows them for the return, never remember past sufferings, like women after their labor. The whole pay is 350 pieces of eight, but they have only 75 paid them at Cavite, when they are bound for America, for if they had half, very few would return to the Philippine Islands for the rest. The merchants, there is no doubt get by this voyage a hundred and fifty or two hundred per cent profit. And indeed it is a great satisfaction to return home in less than a year with 17,000 or 18,000 pieces of eight clear gains, besides a man's own venture, a sum that may make a man easy as long as he lives. Captain Emmanuel Arguelles told me, that he, without having any employment, should clear for himself by the voyage commissions of 25,000 or 30,000 pieces of eight. It was reckoned the pilot would make 20,000 pieces of eight; the mates 9,000 each. The captain of the galleon received 40,000 pesos. The master, his mate, and boatswain, who may put aboard several bales of goods, may make themselves rich in one voyage."

"He that borrows money at fifty per cent may get as much more, without standing to the hazard of losses. These extraordinary gains induce many to expose themselves to so many dangers and miseries. For my part, these nor greater hopes shall not prevail with me to undertake that voyage again which is enough to destroy a man, or make him unfit for anything as long as he lives. I have made this digression to show the reader through what thorns men must venture to come to the so much coveted roses of riches. The Spaniards and other geographers have given this the name Pacific sea, as may be seen in the maps, but it does not suit with its tempestuous and dreadful motions, for which it ought rather to be called the Restless. But the truth is the Spaniards gave it this fine name in sailing from Acapulco to the Philippine islands, which is performed very easily in three months, without any boisterous motion of the sea, and always before the wind, as was said before."

"Tuesday 30th, the wind blowing hard at southwest we steered east and by north, but afterwards the wind came about to the west stormy. That night the waves beat so violently. Wednesday 31st, the day broke with the wind at northwest. The month of October ending with so

many hardships, the sky appeared serene, and the sea calm on Thursday the first of November. At night the wind was northwest and came to west. All night the wind blew hard at northwest and continued Friday 2nd. Saturday 3rd the wind turned to north northwest and therefore we steered east northeast. Saturday 17th it blew hard at southwest. The Indians (Filipinos) born at Manila, where they are always in a sweat, could not endure the cold of this climate. Tuesday 20th, steered east which was our proper course. That day the north wind blew the coldest we had yet felt, and it hailed for half an hour, which I had never seen since I left Europe. Wednesday 21st, being the last day, within which I had laid a wager that we should see land - none being seen, I lost a pair of gold buttons with emeralds in them. At night the wind came to west somewhat stormy, and grew still more boisterous till four of the clock, after which we saw the light, they call St. Elmo (St. Elmo's fire) on the main and fore top mast, which was saluted by all, as a good omen."

During the voyage Careri mentioned that the ship underwent the phenomenon known as St. Elmo's fire or St. Elmo's Light. Luckily for the Spaniards, they were not frightened by the incident, but considered it a good omen sent from God for their journey. If they knew the true nature of how the meteorological phenomenon takes place, they would have probably panicked. The mesmerizing weather phenomenon was caused by thunderstorms. This created an electrical discharge of luminous plasma and a glowing light of a bright blue or violet hue, which was usually centered on the highest point of the ship or the main mast. Along with the light there was usually an electrical hissing sound. The phenomenon was named after Saint Erasmus of Formiae, the patron saint of sailors. It was thus, shortened to St. Elmo's fire. The fact that it was named after a saint probably gave the crew and passengers on the vessel a sense that it was harmless rather than dangerous.

"Friday November 23rd the wind north northwest with hail and rain. The galleon lay with the sails backed very much tossed. Saturday 24th, this day we saw another large piece of a tree in the sea. At night it blew a storm at west with a rolling sea, and we saw Saint Elmo's fire a third time. Sunday 25th the same course. At midnight the light Saint Elmo appeared for the fourth time above the main mast. Saturday the first of December (1696), we held the same course, the wind at first being south, and afterwards southwest. That day a sailor died, and was presently thrown overboard, being the first we lost, notwithstanding all our sufferings. There was no other distemper among us but a raging itch, caused by the salt meat. Thursday 6th, we steered southeast and by east the wind south southwest which afterwards came to west southwest the rain and dull weather

continuing and boisterous sea. At night the wind being contrary, we lay by. ”

“Friday December 7th, in the morning died another sick man who was thrown overboard. Sunday 8th, the wind being at west we sailed southeast. At night we lay by, the wind being contrary. Sunday 9th, the wind blowing very hard at southwest we steered southeast. Monday 7th, we steered the same course, with the wind at west the latitude 32 degrees 27 minutes. At night one of the pilot’s two mates died. Tuesday 18th, all Masses having been said for the dead man and other rites performed, he was thrown into the sea. The same day another sailor died. Wednesday 19th, we held on the same course. This night died the second captain of the galleon, whom the Spaniards call Capitan de Mar y Guerra, the commander in chief being called by the great name of general, he died of the disease of berben (beriberi caused by a lack of vitamin B). There are two dangerous diseases in this voyage one is the aforesaid berben, which swells the body and makes the patient die talking. The other is called the Dutch disease which makes the mouth sore, putrefies the gums and makes the teeth drop out. (Dutch disease or scurvy is caused by a deficiency of vitamin C in the diet). The best remedy against it is going ashore.”

The ship was nearing Baja California. They spotted Cedros Island or Isla de Cedros, which Careri referred to as “Cerros” island. The island was known as Cedros Island as it had a number of cedar trees. There are several small islands located in this area: Isla Navidad and the Islas San Benito. Cedros Island is located approximately 62 miles from Punta Eugenia, Baja California. The other island mentioned by Careri, that is, “Cenicas,” may be one of the smaller islands of the Islas San Benito as there are three small islands located in a cluster.

“Thursday 20th, we steered southeast and by east so that by break of day, we found ourselves opposite to the Island Cenicas, ten leagues distant from the continent (North America). Next we discovered the Island Cerros, 17 leagues distant from the continent. Monday 24th, the wind was northwest and southeast from Acapulco to Cape Mendocino. The same day proclamation was made by drum, to pay the king’s duties for the galleon. Tuesday 25th (Christmas Day), five Masses were said after midnight, in honor of the Nativity of our Lord. We still steered east southeast to discover land, the latitude 23 degrees 56 minutes. Having fired ten cannons and settled them in their places, all persons had muskets given to them, to defend ourselves against enemies that are often met on the coast of California.”

“Friday 28th, about break of day we found ourselves directly opposite to Capo San Lucas (Baja California), which may be called a bald promontory because there is no sign of any trees on it. The latitude of it is 22 degrees 35 minutes and there is a small island close

to the point. We steered next southeast before a small gale at northwest to cross over the Strait of California. Saturday 29th, we steered southeast and by east with the wind. Sunday 30th, the wind blew gently at north northeast. The latitude was 20 degrees 45 minutes. Finding that the current had carried the ship too far from land driving it southward, we stood east southeast with but little wind. For this reason on Monday 31st we did not come upon the three little islands called Las Tres Marias (Maria Madre, Maria Magdalena and Maria Cleofas). These three aforesaid islands are ten leagues from the mouth of the strait bearing northeast and southwest from it. They have good trees and water, abundance of game and salt pits for which reason, the English and French pirates who have passed through the Strait of Magellan to rob upon the South Seas, have sometimes wintered there."

"Tuesday, the first of January (1697) and of the New Year we were again becalmed, and there appeared abundance of lobillos (lobo marinos or seals) about the ship turning up their tails and paws in the air like jugglers. We took five good tortoises, whose flesh were exactly like beef, but not as savory as ours in Europe. The latitude was 20 degrees 11 minutes. The calm held all night. Wednesday 2nd, putting out the parao (small boat) into the water we took seven tortoises that lay floating asleep and some sharks and dorees were struck with a harping iron. About evening a small gale blew at northwest and at night to northward."

January 3rd - "Thus holding on our course on Thursday 3rd, we discovered the land of New Spain, a great way beyond Cape Corrientes. The entire seacoast along here is inhabited by peaceful Indians (Mexicans). We could not get near the land because the currents bear us off and for fear of certain flats which lie opposite to Cape Corrientes. Friday 4th, we found that we had made very little way. Before sunset several muskets were fired to give notice to the galliot (galley), which is usually sent about that time from Acapulco to meet the galleon or to have some boat of Indians come with refreshments, but it was all in vain. Saturday 5th, in the morning the new boat was launched, to land the messenger with letters for Mexico and Madrid. Father Borgia, a Jesuit, who had the Dutch disease, or scurvy, and other sick persons were also put aboard it, to be landed with all speed, but the news is known at Mexico by another express sent by the alcalde of Chiamela (Chamela) as soon as a sentinel from the top of the mountains discovers a sail at sea. Upon the uncertain tidings sent by the alcalde of a great ship seen at sea they began their prayers in Mexico, which are continued till the arrival of the messenger with letters from abroad. When he arrived, all the bells rang in joy and this noise lasted until a third express came from

Acapulco, which brought the viceroy advice of the galleon from China, that it arrived and anchored in the port. The city expresses joy upon the arrival of the floata (arrival of the fleet even though there was only one vessel in this case), the citizens having no less concern about it, the same is done at Manila, when the galleon returns."

"The port of Nativity (Navidad), which is in latitude 19 degrees 33 minutes had water enough for any ships, but there is a rock at the mouth of it. That of Chiamela (Bay of Chamela) is too shallow for any but small boats, but it is large and sheltered by several islands. It abounds in pearls and food fish. All this tract of land from Cape Corrientes to the port of Nativity is called New Galicia (today it is the Mexican state of Jalisco), and is inhabited by conquered Indians. After the calm, which generally happens every morning upon that coast, follows the virazon (sea breeze), or settled breezes. That night we steered southeast along the coast. Sunday 6th, being the Feast of Epiphany, we set forward on the rest of the way, which is counted 80 leagues from Nativity to Acapulco. A gun was fired to give the guards on the coast to understand that the ship was a friend. At sunset we found ourselves opposite to the port and the village of Salagua."

"Monday 7th, steering west northwest before noon, we came to the port and the burning mountain of Colima (volcano), where much salt is made, as well as at Salagua. Still coasting along the bare mountain and steep rocks, about evening the wind having favored, we came upon the coast of Motines, or Montines, as others will have it, because it is a space of land full of small hills all alike. The country is almost a desert, there being only here and there a village, some days journey distance from one and the other. Tuesday 8th, we held the same course. In the evening a small gale came up at southwest but fell again at night, so that we advanced not an inch. This coast of Motines is wonderfully calm. The sky being free from clouds in the day, and at night serene, and the stars bright, especially after the rains are fallen, which begin in June, and last all December. Wednesday 9th, the calm continued and the weather was hot as the dog days in Italy. At sunset the wind came up. Friday 11th, calm again, but late in the evening we had wind enough to come up with the port and village of Siguatanejo (Zihuatanejo), before which are three rocks. At break of day, Saturday 12th, we were still opposite Siguatanejo. The wind quite failed, so that we lay all night in the same place with insufferable heat."

"Sunday 13th, the wind came ahead of us, so that we could do nothing but catch a number of cachorretas. At length, after so many months the anchors were dropped about half a league from land, but at night we were plagued with abundance of gnats and little flies, that stung intolerably. The calm continued Monday 14th. Tuesday 15th, in the morning, the wind came up north, which set us forward. At sunset

we sailed by Salina, a territory subordinate to the alcalde of Palatan (Petatkan), a town a few leagues distant in the valleys. A calm held us all night and Thursday 17th, the same contrary started up, but after dinner the usual virazon, or settled wind coming up, which is southwest. We advanced and ran along the coast del Calvario, full of cacao trees. At night we continued our course east southeast with the wind at north, so that on Friday 18th we were in sight of the port of Acapulco."

"Our chief pilot was sick of the Dutch distemper, or scurvy, and the berben (beriberi), which put his life in danger. At noon a fresh gale blew at southwest which set us forward, we steering east southeast. As we sailed along the coast of Coyuca, we perceived a piragua, or great parquet (a type of boat) making towards us. Being come up, it brought us fresh provisions, which were an ox, fowls, bread, sweetmeats, and lemons sent by the governor, Don Francis Mecca, to our commander - besides other things for private persons, so that everyone had something to refresh himself. The north wind which blew all night carried us so far east and by south that on Saturday 19th, in the morning, we found ourselves opposite to the village and port of Coyuca (Coyuca de Benitez) whose coast being 14 leagues in length abounds in cacao and other things."

The galleon finally arrived in Acapulco after a journey of six months and twenty days. "The wind holding fair, we entered the port of Acapulco, at the great channel, and came to an anchor there at five in the afternoon. Sunday 20th (January 1697), all that were aboard embraced one another with tears of joy, seeing ourselves in our desired port, after a voyage of two hundred and four days and five hours. Te Deum was sung in thanksgiving, but our commander had not the goodness to solemnize it with firing some guns, saying that the powder was not provided to him at Manila. The castle (Fort San Diego in Acapulco) was saluted with seven guns and then answered with three, hanging out its colors (flags)."

The Wreck of the *Santo Cristo de Burgos* 1726

While Careri's voyage to Acapulco from Manila proved successful, there were galleons which never arrived in Mexico. In the case of the *Santo Cristo de Burgos*, which sailed from Cavite to Acapulco on July 8, 1726, the galleon was shipwrecked while still in the Philippines. The vessel, of 500 tons carrying capacity, was under the command of Captain General Francisco Sanchez de Tagle. She sailed with the usual complement of officers and passengers, as well as 252 crew members. The galleon was accompanied by another vessel known as a "galiot," which was a type of galley. The galiot was operated by oarsmen and sails to propel the ship forward.

After receiving the customary blessings from church officials in

Manila, with the entire Spanish community turning up for the send off ceremonies, the two ships sailed towards the mouth of Manila Bay. When they were about three miles from Cavite, the captain of the *Santo Cristo* ordered the anchoring of the galleon in order to re-organize some of the cargo in the hold, as the vessel was slightly listing to one side. After attending to this, the two ships continued on their way.

At first, the voyage from the port of Cavite to the island of Ticao had been largely uneventful. In fact, by all accounts, the two vessels had arrived in Ticao in record time after only eleven days at sea. Normally, the voyage from Cavite to the San Bernardino Strait took about two months to complete due to contrary winds, cross currents and storms the galleon usually encountered during the voyage. However, they arrived in Ticao on July 19, and instead of anchoring at the usual stopover of San Jacinto harbor, the ship anchored a short distance away and along the coast of the island. Why did the vessel anchor here? That was a question only the galleon's commander could answer, as it was a highly unusual thing to do.

The galleon normally made several stopovers in the islands, to take on fresh foods and provisions or to make repairs to the vessel, before actually sailing out of the Philippines. These were pre-scheduled stopovers which the captains and pilots of the vessels were familiar with and understood. The island of Ticao, and its port of San Jacinto, was the last stopover before exiting the archipelago. By not anchoring at the port of San Jacinto, it would have been difficult to replenish the vessel with the provisions it needed to continue the journey across the Pacific.

By July 22, 1726, the galleon began making its journey from the island of Ticao towards the San Bernardino Strait. However, a severe storm arose and prevented the vessel from moving forward. Three anchors were lowered to maintain the ship in its location, but as the storm became stronger, the anchors were unable to hold the vessel in place. Two more anchors were lowered, but they too were unable to hold the ship in its anchorage.

"Their expectations were frustrated. The 23rd broke with a moderate northwesterly and when the sun came out the north wind carried along with it light rain. As this wind increased in force the *Santo Cristo* released another anchor with a hawser of 400 filaments for a firmer hold. Three anchors in all secured the ship. Then observing that the wind had gathered force in half an hour and swung clockwise to northeast, the skipper ordered the topmasts hauled down, leaving the main yard. In no time, the wind howled overhead shifting from the northeast in increasing fury and continuous gusts. In less than three hours it veered round to the east southeast with greater fury so that it

stirred up swirling waves."[143]

"At one in the afternoon, as one seething mound of water after another reared up under the bow and tossed the galleon about like a child's toy, the 500 filament hawser for the bow anchor to the southwest failed. The ship immediately cast out the sheet anchor with its sturdy cable of 600 filaments and fed as much cable as was needed to equalize the pull on the anchors. Gradually the roar of wind and water subsided and a lull followed lasting till four in the afternoon. The relief was short lived. The officers and men began to pray for divine intervention. They felt the southwest wind beginning to blow and saw the foreboding darkness preceding a storm which had formed in that direction. The vendaval (south monsoon gales) could come at any moment, the strong wind they had been waiting for. Unexpectedly, from the opposite side, the east wind came in strongly, and then shifted again to the northeast, roaring through the rigging, masts and yards with an ominous pitch. Its unbridled fury hurled a jumbled mass of hissing dark green water against the ship. As it was six in the late afternoon, the precarious weather persisting and darkness only a moment away, the *Santo Cristo* cast the last anchor, its 600 filament hawser stretched only enough to share the pull with the other anchors. Within a quarter of an hour, when the easterly wind howled again, the master ordered the main yard drawn."[144]

Suddenly, the vessel was pitched around by the wind and the waves and the anchors lost their grip of the seabed. The ship was dragging its anchors. When this occurred, the Spanish officers were terrified. They knew that what they were experiencing was unprecedented and difficult to comprehend. The ship was in great peril. The storm was essentially taking over the control of the vessel, and they were helpless under the circumstances.

To try to regain control of the ship, the officers thought that they could still save the galleon by hauling in the anchors and sailing out to sea to ride out the storm. According to two Spanish gunners on the ship, Andres Phelipe and Fernando de los Reyes, when they testified at an investigation of the incident, they said that the officers discussed the possibility of sailing to San Jacinto, but decided against the idea, as the ship would have probably been wrecked in the harbor. The crew also reported that the officers tried everything they could to save the ship. Nevertheless, the wind eventually threw the ship onto a sandbank where it was stuck fast and tilting on its portside.

On board the ship the situation was total mayhem with passengers screaming and the crew trying to control the ship's movements. They had cut down the main, fore and mizzen masts in an attempt to right the ship from its portside, but their efforts were of little use. They had no choice but to abandon the vessel and luckily they were near the

shore. The passengers were all transferred to the beach as the crew tried to save as much of the cargo as they could. Provisions and supplies were transported to the shore, and a camp of sorts, was established for the passengers and crew until they could get help from the local Spanish mayor and from Manila

While they continued to transfer cargo to the shore, a fire suddenly broke out on the galleon on August 5, 1726. The fire was extinguished, but its cause remained unexplained. The following day, another fire broke out on the ship. The fire may have been started by merchants on the vessel who were indebted to the Obras Pias; the charitable religious institution in Manila which had become involved in providing loans to the Spaniards for their activities with the galleons. Their loans would have been used to buy merchandise that they planned to sell in Acapulco. If the cargo was damaged, the merchants still had to pay the religious institution for their loans. However, if the cargo was lost, due to divine intervention such as the storm, it appears that they probably did not have to pay the sum back to the Obras Pias. In any case, the cause of the fire was never discovered. The second fire managed to destroy whatever was left on the ship including the remaining cargo and the vessel.

At the time of the shipwreck, the Governor of the Philippines was Toribio Jose de Cosio. He had been appointed as governor by Philip V in 1720, and he took up his post on August 6, 1721 in Manila. He governed the Philippines until August 1729, when Brigadier General Fernando Valdes Tamon, replaced him as governor. After the disaster, two investigations into the incident were conducted: one on the island of Ticao, soon after the loss of the vessel, and the other in Manila under the auspices of Governor Cosio later in the year.

The first investigation, the “Interrogatorio,” into the loss of the vessel was organized by Judge Julian Ignacio de Velasco, who was a survivor of the disaster. Thirty crew members and passengers testified at the hearings held at Ticao Island. Two of the captains aboard the galleon, Antonio Pinto and Henriquez Herman attended the hearings which were held from September 9th to the 13th, 1726. The other individuals who testified at the hearings included Juan de Miranda, second pilot; Andres Phelipe, gunner with 30 years experience; Fernando de los Reyes, a gunner who worked on sea vessels since the age of nine; Salvador Hernandez, sailor; Matheo Armento, ship’s carpenter; Geronimo Bermudez, a 30 year old gunner, and Jose Bermudez, a passenger.

The witnesses claimed that the officers and the crew of the vessel were not at fault for the disaster. They said that the shipwreck occurred due to “divine wrath.” After the statement of a witness who was considered highly qualified to give his testimony, Geronimo

Bermudez, the investigation commission suspended its hearings. As far as Bermudez was concerned, the officers of the vessel had correctly discharged their duties on the galleon, but he said that the disaster may have been caused by the fact that the ship was not in its usual anchorage in the Ticao harbor. The harbor was considered a safer anchorage for the vessels during storms. Bermudez went on to say, that he could not definitively state that the ship would not have been lost if it was in its regular anchorage at Ticao. The storm was so powerful that many ships in the area were lost as a result, so the galleon could also have been wrecked at the harbor under the circumstances.

The judges involved in the investigation decided to discuss the incident with the two captains: Captain Pinto and Captain Herman. As both men were also veteran pilots, their statements would have shed some light on the incident. “The two experts (captains) were asked two questions. Would the *Santo Cristo* have foundered, if it had anchored in its regular anchorage? And at the height of the storm, could the galleon have weighed anchor or cut its cables and sailed away to seek safety in another port? Captain Pinto, who had made a study of winds and did soundings of Ticao’s anchorages, certified with accompanying reasons that, firstly, the *Santo Cristo* would have met the same fate much faster in the regular anchorage with greater risk to life for the crew and passengers and secondly, even if the galleon was in its regular anchorage, it would not have been able to weigh anchor or cut its cables to sail in search of a port or run before the storm on account of the strong contrary winds and the risk of immediately foundering on the shoals of Ticao.” [145]

Finally, the investigation committee reached a verdict. The captain general of the galleon and the other officers were all found guilty for the loss of the vessel. As a result, on September 15, 1726, Judge Velasco ordered the arrest and imprisonment of Captain General Francisco Sanchez de Tagle and the confiscation of his property. At the time, Captain General Tagle was a married 26 year old native of Burgos, Spain. The other officers who were also imprisoned and their property seized included: Juan Antonio de Vivano, the ship’s master who was 30 years old and a bachelor from Burgos; Antonio Gil, the 38 year old chief pilot from Seville; Juan de Miranda, a 46 year old second pilot from Manila; Sebastian de Salazar, a 25 year old third pilot from Manila, and Juan Miguel Capelo, who was a 42 year old boatswain from Seville. They were all confined in the camp set up by the Spaniards on the shores of Ticao. But as their assistance was required to help transfer the ship’s cargo to the shore, they were not sent on to Manila. In any case, if they had left the area, they would have been fined 1,000 pesos each.

Another investigation into the case was conducted in Manila by the Royal Audiencia on September 27, 1726. Again, the conclusion was that Captain General Tagle was at fault for not anchoring at the usual location on the island of Ticao. As it was concluded that the disaster was not man-made, in October 1726 the defendants asked that they be pardoned for all charges brought against them. However, Captain General Tagle and his chief pilot were once again found guilty and blamed for the loss of the galleon. In any case, they managed to escape imprisonment. But in January 1727, the case was once again under scrutiny in Manila, and this time, all six officers including Captain General Tagle, were imprisoned and their properties confiscated by the government.

Chapter 13

Daily Life on the Galleon

All who sailed aboard the Manila-Acapulco galleon had to endure a multitude of hardships during the grueling voyage. For some, the ship became their home during the six to seven months journey to Acapulco, but to others it had become a prison. One passenger who thought it was the latter was Friar Bartolome de las Casas. During his voyage to Acapulco in the sixteenth century, he commented that, “The ship is a very confining and powerful jail from whence no one can flee, although it has no grilles or chains, and it is so cruel that there is no difference between prisoners and the rest, who are equally ill treated and confined. ”[146]

Those who made the journey described the conditions on the ship as being intolerable. According to another traveler, Tomas de la Torre, the smells emanating from the interior of the ship were enough to make one sick. He said, “Below decks, the air was noxious, because the frequent operation of the pumps stirred up the bottom of the stinking hold, which was a receptacle for vomit, human excrement and all sorts of rubbish. ”[147]

But no matter how the passengers described their experiences of living on the galleon, they had no choice but to cope with the conditions they encountered. Sharing space on the ship, with an assortment of fellow travelers and crew members, had to be a daunting, as well as a frustrating and frightening experience. There could be as many as three to four hundred people on a galleon, so the voyage brought together many individuals from varying cultures and levels of society, into close proximity with each other, whether they wanted to or not. The lack of space on the ship led to cramped conditions, which in turn, tested one’s patience. Tempers were easily aroused under the circumstances. But while the passengers looked down upon the crew members, to the common sailors they were a source of amusement. They especially enjoyed watching them when they were seasick.

At times, the voyage was the cause of sheer terror. If the ship was caught up in a severe storm and tossed by huge waves, everyone began praying and hoping for divine intervention and rescue from possible destruction. And then, as the ship sailed closer to the coast of California, there was always the threat of an attack by pirates. The danger was always a real possibility given the fact that foreign enemy vessels had successfully captured galleons in the past. The fear of an attack must have been on everyone’s mind. This would have been

especially worrying when the captain ordered the distribution of small firearms to the crew and passengers, to defend themselves against a possible attack even though there were no enemy ships in the immediate vicinity. However, they were being prepared for that eventuality, if it occurred.

There were also times of joy and happiness especially when a night's entertainment led to a rousing sing-along with singers accompanied by guitar players, fifes and drums. Helping to overcome their fears, daily masses were held by the priests who tried to alleviate their nervousness and attend to their spiritual needs. If someone became sick or was on the verge of dying, the chaplain and surgeon cared for the person in an attempt to heal, comfort or administer the last rites to the dead.

As the ship functioned as a self-sufficient entity, it had to provide the individuals on board with all the basic essentials for life such as water and food. It also provided them with accommodations they could use during the long drawn out voyage. Crew members had to continuously maintain and make repairs to the ship as required in order to ensure that the galleon remained seaworthy. Their work was never ending and at times, such as during a storm, they may have had to work around the clock.

But as the main task of the galleon was to transport cargo from Manila to Acapulco, the majority of the space on the ship was allocated for the stowage of valuable cargo. This took precedence over the comforts provided to the crew and passengers.

Accommodations on the Galleon

While the ship was in its preparatory stages at the port of Cavite, the crew and passengers came aboard the vessel. They were assigned to their quarters on the vessel or in the case of the crew members, they found sleeping accommodations throughout the ship. Accommodations varied according to one's station in society and how much the individual paid for a cabin or sleeping area. On a typical galleon, the few cabins which were available were occupied by the captain of the ship, the chief pilot and the ship's master. Several other cabins would have been available for paying passengers especially those individuals who were aristocrats or important persons in Manila, Mexico or in Spain.

Of course, the type and size of a sea vessel dictated the spaces allocated as accommodations for the officers, crew and passengers. Space within the vessel was usually at a premium especially where the Manila galleon was concerned as its primary focus was the transportation of cargo to Mexico. A typical galleon had two or more decks above the hold. The hold was usually filled with cargo while the deck above this area, the lower deck, contained additional cargo,

provisions, supplies and equipment. Above the lower deck was the gun deck with its cannons and gunports. The superstructures fore and aft on the upper deck provided additional accommodations.

As an example of the crowded conditions on a galleon, one need only look at the *San Diego*. When it sailed from Cavite, for what should have been a few days' confrontation with the Dutch, who were blockading Manila Bay, the ship carried everything it might have needed for a seven month's ocean voyage. "On its final voyage, the archives and archaeological sources tell us of a hold crammed with large terracotta jars, cannon installed in the ports on the first deck, surrounded by gunners, barrels of powder and stacks of cannonballs. Anyone who could not find room anywhere else had to carve out a space on the top deck, amid the cages full of chickens and personal effects of Spanish noblemen and officers. It was probably an indescribable chaos in which everyone kept bumping into everyone else. The crew slept in the forecastle because there was no room anywhere else. The Spanish aristocrats shut themselves up in the hastily built cabins and the various groups of people settled in as best they could. The final episode in the story of the *San Diego* lasted only two days, which at least meant that no one had to put up for very long with the extreme living conditions which were an inseparable part of ocean travel." [148]

Archival information also provides an insight into the types of accommodations which were available for the crew and passengers on the *San Diego* gallon. "The little we can learn about the subject comes from the archives and in particular the testimony given by the survivors of the wreck in 1600. Numerous witnesses mention the wooden beds brought on board by the Spanish officers and aristocrats. During the battle, Dr. Antonio de Morga wrapped himself for protection in one or possibly more mattresses which he also used when it came time to escape the sinking ship. 'Doctor Morga escaped from the ship on a raft made from a mattress and a bed.' But it is difficult to believe that beds and mattresses could have been used by many of the men on board – although the aristocrats and officers may have slept in beds at home, all of the men, most of whom had no assigned place to sleep, must have stretched out on simple hammocks, as was the custom in Europe. Under normal conditions, there was probably very little furniture on board, consisting of a few tables and chairs, essentially for the officers, and mostly of chests in which everyone locked his personal property." [149]

Captain's Cabin

The captain's cabin was the most comfortable and spacious of the accommodations on the ship. It was located at the stern end of the superstructure or stern castle. If the ship carried both a naval captain

and a captain of war, they were both expected to share the cabin. On the other hand, if an admiral was sailing on the vessel, the captain gave up his accommodations to the higher ranking officer and found lodgings elsewhere. This meant that one of the other officers was displaced and had to find alternative accommodations. However, on some of the larger galleons there were two cabins located in the stern superstructure - one atop the other, which were both the equivalent of a captain's cabin. In that case, they were usually occupied by the senior officers such as the admiral and the captain.

The captain's cabin was the only accommodation on the ship with windows, which provided natural lighting during the day. As furnishings on the ship were sparse, this was also the case when it came to his quarters. In the cabin, there was usually a dining table with chairs where the he could invite fellow officers to dine with him or have meetings. There was also a smaller desk where he could write in his ship's log. A map holder was bolted to the wall, while other furnishings included a wash stand and a cot-like bed where he slept. His trunk, with his personal effects, was placed in the cabin, as well as any other furnishings he brought onto the ship for his own comfort. These may have included additional standing cupboards and bedcovers, but it was not uncommon for the captain of a ship in Spain, to take along with him a four poster bed, day beds, mirrors and even paintings.

It was not unusual for officers to furnish their accommodations with items that made their lodgings more comfortable. These would have included household items such as bed linens, mattresses, chamber pots and small writing desks. In order that their servants and cabin boys could properly serve their meals, they would have furnished their own table linens, silver and ceramic dishes, goblets, water pitchers, eating utensils and even pots and pans. Some of these items may have been quite expensive and made of silver and gold, as well as porcelain.

Lighting would have been provided by oil lamps and candles in their holders. If there were any valuables on the ship, they may have been stored in the captain's cabin as it was the safest and most secure location on the vessel. There was always a soldier stationed to guard the captain's quarters throughout the journey. There may also have been small weapons in the cabin for his use during confrontations with enemy vessels, as well as his own navigational instruments.

Ship's Master and the Chief Pilot

The ship's master was provided with his own cabin, which was located in the stern castle and ahead of the captain's quarters. Just outside of his cabin, the helmsman was at his station in front of the whipstaff. In his accommodations, the master had a cot or floor pad on which he slept, as well as a sea chest, where he kept his personal

possessions.

The chief pilot was accommodated in the pilot's cabin which was also known as the "camarote." The cabin was located on the poop deck in the stern castle, above the captain's quarters. From his lodgings, the pilot had an unobstructed view of the ocean ahead. He normally shared his accommodations with his assistant pilots. Generally, the galleons travelled with a chief pilot and his two assistant pilots, as a precaution in case he became incapacitated or died. In that eventuality, one of the other pilots could take up his duties. But as the ship's master was usually a qualified navigator as well, there were essentially four men on the ship with navigational skills.

In his accommodations, the chief pilot had a cot, chairs and a table on which his navigational instruments were placed. He used these everyday in order to find the ship's position on his charts and maps. The navigational instruments would have included a compass, back staff, quadrant and an astrolabe.

The Other Officers

The junior officers were assigned smaller sleeping quarters similar to those provided to the passengers in the stern castle. They were actually located on the stern end of the gun deck under the captain's cabin. Officers were generally accommodated wherever their duty stations were located on the ship, so that they could be nearer to the sailors and soldiers under their supervision. If they had a space of their own, it usually consisted of an enclosed partitioned area. These spaces were separated from each other by wooden partitions or canvas curtains. They provided the user with a modicum of comfort and privacy, and could easily be set up and quickly removed during the day or if a battle with an enemy vessel was imminent. If there were more passengers on board than expected, the junior officers rented out their accommodations to the passengers and earned a bit of money in this way. They found other accommodations on the gun deck in similarly screened off cubicles. In their very basic quarters, they normally had a hammock, cot or floor pad to sleep on.

The boatswain slept on the upper deck near the main mast and the steward was accommodated in the fore castle. Both men were within hearing distance of the captain, pilot and ship's masters' orders. As the silver master was considered an important official, he was accommodated in the stern castle in one of the smaller cabins. The master gunner and the gunners who operated the cannons on the ships, found accommodations in the stern end of the lower deck in the area known as the "gunner's ronda." This area was closed off from the rest of the deck by a wooden partition. This was probably due to the fact that artillery was stored there and it was necessary to secure the

area.

The Chaplain and the Surgeon

The chaplain was accommodated under the portion of the upper deck, that was covered and led to the masters' and the captain's cabin. This area was also known as the quarterdeck (alcazar). There were usually other priests and missionaries travelling on the Manila galleon on the journey to and from the Philippines and Mexico, and they may also have lodged in this area in partitioned cubicles. If the chaplain was a military chaplain, he may have been accommodated in the same area as the soldiers.

The surgeon was lodged just in front of the gunners' accommodations on the lower deck near the stern chase guns. In his accommodation, which was probably a partitioned space, he had his personal possessions, as well as his medical equipment and medicines.

Soldiers, Sailors, Apprentices and Pages (Cabin Boys)

Soldiers and sailors were accommodated on both the lower deck and the gun deck where they slept on sleeping mats or in hanging hammocks and covered themselves with a blanket. The use of hammocks became popular in the sixteenth century. It was an idea picked up by the Spaniards in their travels to the Caribbean where the natives often slept in them. During the eighteenth century, many naval ships were already providing their crew members with hammocks. Not only did they save space on the deck, but they were comfortable and could easily be rolled up and stowed when not in use.

Most sailors and soldiers preferred sleeping on the gun deck, as it was better ventilated by the fresh sea air, as well as allowing more light to enter the deck through the gun ports. If they were accommodated in the lower deck, they found it was too enclosed, dark and smelled badly. But if the weather was pleasant, they often slept on the upper deck between the main and mizzen masts under the quarterdeck of the stern castle.

Sailors could also be found lodging at the fore castle. Space was made available by the fact that not everyone on the ship was asleep at night. At least one third of the crew was awake during the nighttime hours, and this provided space for the crew members who wanted to rest. There were soldiers and sailors who stayed awake during the night to maintain the night watch, and others who had guard duties on the vessel, while officers were involved in operating the galleon.

Sailors slept on the lower deck in the mid-section between the main and the mizzen mast. As it was difficult for them to find any privacy on the ship, men often got together with fellow mariners and placed their sea trunks in the same location. They shared their meals and slept in the same place. As a result, the individual areas on the ship,

which were shared by a group of sailors, came to be known as a "rancho" or a "camarada." The word "comrade" originated from the Spanish word of "camarada," whereby fellow sailors formed their own small unit or community on the ship. Most probably the men in the camarada were all from the same hometowns in Spain, Mexico or from Manila. This sort of bond would have united them as fellow countrymen.

The crew members were allowed to take one sea chest onto the ship which contained their personal possessions. These were tied down and secured wherever the men found accommodations on the vessel. They were generally simple wooden chests and also served as table tops when the crew were having their meals or when playing card games. In the sea chests they kept extra clothes, as well as eating implements such as knives and a fork, a wooden bowl or plate, and a jug for water and wine rations. If they were musically inclined they might have had a flute, or if they planned to fish during the journey, a few fishing implements such as lines and weights, were kept in the sea chest.

It was not unusual for crew members to carry small bits of merchandise in their sea chests that they hoped to sell in Acapulco. If these items were discovered by customs officials in Acapulco, they were normally confiscated and resold with the funds going to the royal treasury in Mexico City. But as the customs officials were mainly interested in large quantities of smuggled goods, they were not so concerned about the crew members' sea chests.

Apprentices slept on the lower deck between the fore and main mast or near the cooking area. The pages (cabin boys) slept wherever they found space on the ship, but could generally be found on the upper deck and in the forecastle.

Passengers

The passengers who boarded the galleon in Cavite included Spaniards and Mexicans of Spanish descent and came from all levels of society in Philippines. There were government officials with their families, merchants, military personnel, priests, missionaries and nuns. They also traveled with their servants and slaves. Occasionally, well to do travelers, such as Gemelli Careri, booked passage on the galleon, as they were wealthy enough to travel around the world for their own personal pleasure. The passengers paid a fee of 1,500 pesos for the journey from Manila to Acapulco and 1,000 pesos for the return trip. Members of the clergy were allowed free passage on the galleons.

The ship's master would have been aware of the number of passengers that were expected to travel on the galleon and their required accommodations. If they were paying for a cabin or a curtained off lodging, these would have been built by the carpenter by the time they boarded the ship. Most passengers were accommodated

in the stern castle, which was better ventilated with fresh air. Even though they may have had larger accommodations below decks, the passengers were loath to stay there because of the awful smells emanating from the hold. They preferred to cope with the heat or colder temperatures when lodging on the upper deck in the stern castle or the quarterdeck.

The passengers were allowed to board the ship with two trunks filled with their personal possessions. They were also permitted to bring on board their own supplies of food, as well as a cot or small bed with mattress and bed linens. Passengers who could afford better accommodations, paid for the construction of smaller cabins on the upper and lower decks. In this case, the ship's carpenter built the smaller accommodations for the passengers, which they sometimes shared with other individuals. On average the passenger cabins measured approximately five feet square.

If they were accommodated in the smaller cramped cubicles within the galleon, these would have been partitioned from each other by thin wooden panels or canvas curtains. Generally, the passengers were not provided with the type of accommodations made available to the captain, the ship's master or the chief pilot, as space was obviously limited, but in the case of Gemelli Careri an exception was made. When he sailed on the *San Jose* galleon from Manila to Acapulco in 1696, he was provided with a small cabin for his own use. No doubt, he paid handsomely for the accommodation and seemed pleased that unlike other passengers on the ship, he truly had a small private cabin to himself.

The fact that the ship's master often ordered the carpenters to construct a larger number of cabins than usual for the paying passengers, the interior of the vessel became extremely crowded and cramped. As a result of these conditions, the weaponry was often dismantled and stowed in the hold to make more room for the passengers to the detriment of the vessel. If the galleon was attacked, it was basically defenseless. "The greed of ships' masters converted the interior of the hulls into a real labyrinth of rooms and chambers built in precarious fashion where the passengers pressed themselves in with their families and their provisions because the master was only obliged to give them a daily ration of water, firewood and salt. Juan de Melgarejo acted as a constable during inspections made of ships before departure. He denounced this widespread custom in a memo directed to the king, 'All the masters of the ships that go to the Indies make many chambers on their ships in the castle (stern castle), and beneath the tolda (quarterdeck), that the passengers rent …so that the whole of the castle is occupied, which leaves only a very narrow place through which a person can pass. They carry in the said chambers

large earthen jars, and many jugs and barrels of water and wine and vinegar and oil and olives, and they put in many encumbrances and heavy things, which are very prejudicial, because that is where the artillery goes. Nor can the gunners pass through nor reach the gun to which they are assigned, for the same reason that the ships travel overly loaded. Neither the bronze nor the iron artillery can be lifted into place. They dismount the guns from their carriages, axles and wheels and put them below on the ballast.' "[150]

Clothing Worn by the Officers, Crew Members and Passengers

The clothing worn by the people on the ship provided an indication of their standing in society. Of course, the officers and Spanish passengers dressed in finer clothing than the crew members. The officers and wealthier male passengers in Spain, and most probably in the Philippines, during the sixteenth century wore long, heavy coats which were adorned with gold buttons and braiding. During this time period, it was the fashion to wear knee breeches adorned at the knees by colored ribbons. It was also customary to wear fitted stockings, white shirts with cravat and waistcoats. Shoes were elaborately decorated by buckles and on their heads they favored wearing large felt hats. Both men and women enjoyed wearing clothing made of the finest fabrics such as silks, satins, taffeta and linens, while in cooler climates velvets and woolens were used. Unlike the officers on the vessel, the male and female passengers usually wore an assortment of jewelry, that is to say, they both wore many rings on their fingers and gold chains around their necks. However for the sake of safekeeping, the women, in particular, wore most of their jewelry during the journey to protect them from thieves on the ship.

Another fashion accessory was the sword. Most men carried a sword if they were gentlemen. While traveling, they most probably tended to wear more comfortable clothing given the circumstances of the arduous journey. The priests, missionaries and nuns, dressed in heavier clothing no matter what time of the year it was. Priests wore unadorned heavy, long black plain robes. Missionaries and nuns wore similarly plain clothing, which must have been very uncomfortable to wear in the hotter climates of the tropics.

As the Spanish sailors were not provided with uniforms during the sixteenth and seventeenth centuries, they were allowed to dress in their own clothing. If there was anything that distinguished mariners from other men, it was the fact that they wore loose comfortable clothing, which allowed them to move quickly. But the quality of their clothing depended upon how well off or how poor they were. If they were destitute, they wore patched up garments.

As they had to handle the rigging, sails and many other duties on the ship which required quick movements, they wore clothing that allowed them to easily perform their duties on the ship. They wore shirts, knee breeches, stockings, buckled shoes, and a belt of leather or cloth where they kept a short knife used when working or eating. They might also be seen wearing a scarf around their necks and a short waistcoat. Atop their heads they wore a woolen cap or hat and in their sea chest they carried a "capote de la mar," which was a cape used during cold weather or as a blanket at night. When working on the ships in tropical climates they did not wear shoes or stockings and wore less clothing in order to remain comfortable and mobile. The clothing was simple, but functional.

The Asians working on the ship whether they were Filipinos or Chinese, most probably dressed as they were accustomed to dress on land. They wore loose baggy cotton knee pants, shirts, and wore slippers or went barefoot. Some wore hats made of straw when working on sampans and delivering cargo to Manila. They wore a scarf around the neck or around their heads. They basically wore the clothing they were familiar with in the tropics, but when the galleon approached the colder temperatures of the North Pacific, the captain usually ordered the distribution of warmer clothing to the crew.

The beginning of naval uniforms at sea was introduced in the eighteenth century. The British and the French provided their officers with uniforms although the sailors aboard the vessels continued to dress in the traditional style of sea mariners with loose clothing preferred in order to attend to the many duties they had to perform on the ship, which required quick reactions.

Personal Possessions of the Officers, Crew and Passengers Found on the *San Diego* Galleon Shipwreck Site

During the excavation of the *San Diego* galleon shipwreck site in the Philippines, the archaeologists found a number of artifacts which were at one time the personal possessions of the crew and passengers on the vessel. These artifacts serve as an insight into their lives during the sixteenth century. For example, a large quantity of belt and shoe buckles were uncovered, as well as sword hangers. As the ship carried 300 persons, their leather shoes and belts had deteriorated long ago, but the shoe and belt buckles and the sword hangers, made of bronze and silver, remained at the bottom of the sea. The silver and copper sword hangers consisted of metal objects with a curved hook, which were attached to the belt and from which the sword was hung. They were considered another type of jewelry accessory and were quite ornate with portraits and other designs. As only distinguished men in the military or in society carried swords, the fact that so many of these sword hangers were found, serves as an indication of the number of

highly placed officials who were on board the *San Diego* when it sank.

Other personal objects uncovered included jewelry such as a gold necklace and chain and a gold ring; a book clasp from a book cover; a signature seal which belonged to Dr. Antonio de Morga the captain of the *San Diego* and, an ivory chaplet and a pin. An ivory crucifix reminds us that priests traveled on the ship to attend to the spiritual needs of the individuals that sailed on the galleon. As the purpose of the *San Diego*, on this particular voyage, was to serve as a warship against the enemy vessels in Manila Bay, it is doubtful that any women would have been aboard the ship. The jewelry, that was uncovered, would have belonged to the wealthier Spaniards on the vessel. As only the one metal book clasp was uncovered, it may have belonged to a prayer book. No doubt the officers and dignitaries on the ship brought books with them to while away the hours when not engaged in battle with the Dutch. These deteriorated long ago, but the metal clasp survived the centuries of being under water. The metal clasp indicates the importance of the book.

The discovery of twelve Chinese padlocks and ten small keys provides evidence that the Asian men on the ship brought their trunks onto the vessel. Crew members were permitted to take one trunk onto the ship and these would have been secured by padlocks. In this instance, the Asian style padlocks probably belonged to the Japanese, Chinese or Filipino sailors on the ship. The keys on the other hand, may have belonged to trunks owned by the Spaniards, which they would have carried in a pocket or on a chain around their necks. The Spanish trunks usually had a locking mechanism already built into the trunks. Other items related to the trunks were four copper handles and bronze hinges. Several pieces of black lacquered wood with gold decoration may have been from the panels of a case or piece of furniture.

The eating implements which were uncovered at the wreck site attests to the fact that the Spanish officers and dignitaries on the vessel were accustomed to using fine china and drinking wine in exquisite glass goblets when dining. A number of artifacts in this category included: knives, forks and spoons, dinner plates, pitchers, one glass goblet, two ewers, and a drinking cup.

Daily Routine of the Officers and Crew Members on the Galleon

After the passengers and crew found their accommodations on the ship and all the preparatory stages for the voyage had been completed, the galleon was ready to embark from the port of Cavite. Using the capstans, a team of sailors began raising the small ship's boat from the water onto the main deck where it was secured using ropes. Other teams of sailors began to haul in the heavy anchors, releasing the mooring ropes and raising the sails. According to Juan

de Escalante de Mendoza in the sixteenth century, the pilot shouted out his orders to the men saying, “Ease the rope of the foresail, in the name of the Holy Trinity, Father, and Son, and Holy Spirit, three persons in one single true God, that they may be with us for a good and safe voyage, and carry us and return us safely to our homes!” [151]

The galleon sailed to the walled city of Manila where the priests gave the ship and all who sailed aboard her their blessings. The vessel then turned around and headed towards the mouth of Manila Bay for the two month journey to the San Bernardino Strait and the Pacific. By this time, the passengers were in the early stages of seasickness with most confined to their beds or standing by the railings hoping the fresh air would help alleviate the nausea. Some of the crew members were also suffering during these early hours of the voyage especially if they had never been on ship before. They would have included the Filipino and Chinese crew members who were recruited to work on the galleon by the Spaniards in Cavite. They too, felt the ill effects of the moving ship. As these individuals were normally held in low regard by the Spanish and Mexican crew members, they would have been assigned the worse jobs on the ship, as well as smaller food rations and uncomfortable sleeping spaces on the vessel. But whether they felt the effects of sea sickness or not, they were compelled to carry out the orders of the officers who commanded them.

As the journey progressed from Cavite to the San Bernardino Strait, the vessel was a hive of activity. Crew members were assigned to make daily repairs and cleaning duties. Ropes and rigging had to be repaired and torn sails mended. Caulkers attended to the planks refilling them where necessary with new caulking materials. Decks had to be continuously washed and kept moist so that the planks did not dry out and crack on the upper deck. Meals had to be prepared and distributed to both the crew and passengers. Cannons and artillery were cleaned and maintained by the gunners and soldiers. All these daily rituals turned into the daily routine of the ship. This same routine would continue until the ship arrived in Acapulco, but the routine was broken up from time to time by entertainment and recreational moments, as well as the religious services held on the ship.

The daily workday on the galleon was divided by watches during which the chief pilot notated the hour, minutes and the latitude of the ship’s position on his charts. Using an hourglass, which was located by the helmsman’s station and turned over every hour by a cabin boy, the pilot could keep track of the hours in a day. A ship’s compass was also located in front of the helmsman in its own wooden cabinet. The helmsman could easily monitor the direction the ship was heading towards based on the instructions he received from the chief pilot.

There were three watches on the ship with the first from 4 pm to 12 midnight and supervised by the captain. The chief pilot was in charge of the second watch which ran from 12 midnight to 8 am. The ship's master managed the third watch from 8 am to 4 pm. The most crucial of the watches was the late night watch from 12 midnight to 8 am, as the crew members assigned to this watch, had to be vigilant and stay awake which was often difficult to do. If one fell asleep during this watch, he was often severely punished.

Music was used on the ship as part of the workaday process as well as for entertainment. As the sailors performed their duties, whether it was turning the capstan to raise the anchor or climbing up to the yards and releasing the sails, they continuously sang out tunes to maintain the pace and rhythm of the work. When in battle, the drums were played to rally the soldiers on as they attacked the enemy.

Provisions of Food and Water

Even though the galleon carried a valuable cargo of commercial value, it was water that was the most important necessity of life for one's existence on the long sea journey. The importance of water on the galleons was confirmed by Gemelli Careri. He said that the *San Jose* carried one thousand jars of water for consumption during the voyage. He also mentioned how the captain of the ship had to begin rationing the water as the galleon neared the area of the Marianas (Guam). Daily allowances per person per day were cut as their water supplies were already growing short. The measure was necessary, as they still had at least three more months to go before arriving in Acapulco.

The galleon had to carry all of the provisions required to sustain life aboard the vessel for the six to seven month's journey from Manila to Acapulco. In particular, carrying enough water for all aboard the vessel was of prime concern. It was not unusual for the ship to be supplied with as much as one to two thousand Oriental jars filled with water. The number of water jars depended on the length of the voyage, and how many persons were sailing aboard the vessel. The water jars were stowed in the hold in a specially designated storage area next to the main mast. They were placed there, as they also served as additional ballast for the ship. As the water in the jars was consumed, they were refilled with seawater and replaced in the hold to ensure that the ship's weight remained unchanged.

As water was such a vital necessity on the ship, it was jealously guarded. One of the crew members was assigned the job of doling out the daily water rations to the crew and passengers. He was known as the "water constable" (alquacil de agua), and his presence on the ship was necessary especially when water rations were reduced during the voyage. This often led to difficulties amongst those individuals who

lobbied for a larger share of the daily water rations. Given this fact, and since it was considered a precious commodity, fresh water supplies could only be used for drinking and not for washing.

When it rained, the sailors collected rain water which helped to replenish the ship's supplies of fresh water. According to Careri, the sailors had an ingenious way of collecting the rainwater. He said that as the *San Jose* sailed north from the Philippines the ship encountered a mild rain shower. The sailors stripped off their clothing and began collecting the rainwater by inclining canvas mats against the side of the ship. The rainwater flowed down the canvas and along a split bamboo, which served as a drain, into empty jars. No doubt the rainwater was considered a divine blessing due to the fact that by this time the water in the jars in the hold had already begun to smell badly. During the collection process, the atmosphere on the vessel became festive. The sailors collected so much rain water that they were allowed to use some of it to cook rice, which apparently was a treat for them, as they were mostly consuming daily rations of biscuits, fried meat and fish and other staples such as beans.

The galleons also carried a huge supply of provisions for the crew and passengers to consume during the voyage. But the foods which were consumed by the officers and the paying passengers were very different from those provided to the crew. The captain and officers brought their own supplies of special foods onto the ship which included wines, sugar, bacon and dried fruits.

The wealthier passengers brought an assortment of food items which included pigs to be slaughtered during the journey, egg laying hens, wines and other alcoholic beverages. They also brought their favorite foods such as fresh and dried fruits, honey, jams and confectionaries or sweetmeats, sugar, olive oil and olives and chocolate. The passengers also brought their servants and slaves to prepare and serve their meals. However, the less fortunate passengers such as the priests, missionaries and nuns, had to contend with eating the same rations served to the crew members unless they too, brought provisions onto the ship.

Passengers were also allowed to partake of the same rations consumed by the crew members on a daily basis, but unlike the crew members who received the food allowances free of charge the passengers had to pay a fee to the ship's master for a share of the rations. The ship's master was only required to provide the passengers with water, salt and firewood to cook their meals. The meals would have been prepared at the galley by the ship's cook along with the help of the cabin boys. He was the only one allowed to handle the cooking fire.

A list of provisions was prepared by the Royal Arsenal in Manila for

the *San Diego* vessel in 1600. The foods listed included, “rice, biscuits, beef, fish, and live chickens in cages, water, wine and vinegar are the only products mentioned in this inventory, but they were supplied in impressive quantities. More than 8 tons of rice, 135 thirty-kilogram sacks of biscuits, 28 barrels and one cask of sardines, 3 barrels and 24 bundles of beef, three hen houses full of chickens, 55 casks of water, 7 barrels of wine and 3 of vinegar. ”[152]

Additionally, 2,000 animal bones and fragments were found at the archaeological wreck site of the *San Diego* galleon. The remains served as an indication that the ship carried chicken and preserved pork in jars. Biscuits would have been carried in sacks, while dried fish and beef were packaged in bundles. Beans and legumes were carried in sacks or baskets.

According to Careri, the *San Jose* galleon resembled a moving garden as its decks were covered with fresh fruits taken from the islands they passed on their way to the San Bernardino Strait. This was probably true given the fact that the decks would have been covered with crates of fresh fruits and vegetables. The ship, most probably also resembled a barnyard, as there were pigs and hens in their own areas on the vessel with the hens in chicken coops and the pigs in temporary sties. While they were still in the Philippines, and sailing towards the San Bernardino Strait, they were continuously able to take on board fresh provisions for the journey - adding to the jumbled crates and hen houses on the upper deck.

Careri pointed out that the food allocated to the crew and passengers (those passengers who were not wealthy enough to bring their own provisions with them), was paid for by the king. As Careri, was financially in a better position than most on the vessel, he made an arrangement with the boatswain who provided him with meals and cooked for him. When the voyage had first set out, Careri enjoyed meals which included wine, oil and vinegar. However, as the days passed into months, the condiments disappeared. His fish was prepared with only water and salt. He was also fed meals of fried dried beef “tasajos fritos,” which was a dried buffalo steak – difficult to eat unless it was hampered flat before cooking. Another time, he was given this same type of buffalo meat, which was boiled with no other sauce except for water. When the boatswain ran out of provisions, he had no choice but to offer Careri a meal composed of his own crew’s rations. This consisted of worm ridden biscuits. The only respite to the dreadful meals was the fact that the sailors were able to catch fresh fish, which helped to ease the food shortages on the vessel.

Provisions for the crew were not as elaborate or diversified as the costly foods brought onto the ship by the officers and passengers. The

foods used to feed the crew would have consisted of Filipino grown agricultural products such as fruits (mangoes, papayas, and coconuts), vegetables (cabbage), tamarind, ginger, soya beans, biscuits, rice, salted fish, salted beef and pork, sweet potatoes, wheat flour, dried beans, dried shrimp, cheese and lard. Food remains found at the *San Diego* excavation site included bits of coconuts, legume seeds, nuts, peach pips and curry powder. As the provisions had to last for the six to seven months voyage from Manila to Acapulco, many of the foods had to be preserved using a variety of methods. They were preserved in brine, vinegar, honey or sugar and were also dried or salted.

Some provisions for the galleon were imported and brought to Manila by Portuguese and Chinese merchants. From these merchants, the Spaniards bought fruits and vegetables and other produce, as well as sago flour which were used in the production of the biscuits and bread taken onto the galleons. Other food items were imported from Mexico. Captain Sebastian de Pineda stated that food items were brought to Manila from Mexico and these included garbanzos, beans, lentils, which were provided to the hospitals and convents in the city, as well as provisions for the galleons. But he complained that by the time the foods arrived in Manila from Acapulco, they were already rotten and were of little use to anyone in the city. “Flour is also shipped in pipes (a type of barrel) from Nueva Espana to the Filipinas, which they say is for making hosts. That is unnecessary, for the islands have an abundance of flour, which is shipped from Japan and China so cheaply, that it costs sixteen reales per quintal in the city of Manila. The flour shipped from Nueva Espana costs your Majesty, when delivered to Manila, more than eighty reales per quintal. ”[153]

The crew would have been well fed during the journey from Cavite to the San Bernardino Strait, as the ship was re-supplied in various ports. The food problems began when the ship left the Philippine Islands. As food supplies diminished, the meals fed to the crew became less palatable. Careri wrote that as the wealthier passengers on the *San Jose* galleon had brought such large quantities of provisions onto the ship, they still had sufficient supplies of food to eat as the ship neared Acapulco. Even though the crew and other poorer passengers were starving on the vessel, the wealthy passengers ate all sorts of foods on the journey from fowls to sweetmeats, hot chocolate twice a day, while the sailors had to make do without these luxuries. As a result of not having enough nourishing foods to consume, the sailors became sick. Another problem which also increased the number of sick individuals on the vessel was the cold weather and heavy rains. It must have been difficult for the sailors to carry out their duties, while they were hungry and watched the wealthier Spaniards, who were obviously well fed during the journey. While the

sailors basically starved, it was forbidden for them to try to take any of the food privately owned by the passengers.

In Spain, the provisions carried on the galleons for the crew and passengers of the Atlantic fleets included biscuits, olive oil, garbanzos, broad beans, dried legumes, rice, garlic, salted and dried codfish, salted pork (bacon), salted beef, ham, cheese and olives. Fresh fruits and vegetables would have been taken onto the vessel for early consumption as they were perishables, as well as live animals which were brought onto the ships by the officers and wealthier passengers. Wines, cider and other alcoholic beverages were also taken aboard the ship by the officers and passengers.

A document from the Archivo de las Indias in Spain indicates the type of rations provided to the crew on ships sailing from Spain to the Americas in the Atlantic convoys. The document is from the fleet of Pedro de las Roelas who traveled from Spain to the Americas in 1563. The rations listed in the document were similar to those carried by the Manila-Acapulco galleons. These included biscuits, wine, beef, salted fish, salted pork, beans and peas, rice, cheese, oil, vinegar and garlic. Another list of provisions was available in Spain dating from 1665, indicated the daily rations provided to an individual member of the crew. This included 24 ounces a day of biscuits, one “cuartillo” a day of wine, eight ounces of fish four days a week, eight ounces of salt pork three days a week, peas and beans two ounces four days a week, one and a half ounce of rice three times a week, one and a half ounce of oil every day, one half cuartillo of vinegar every day, and a small amount of cheese every week.

The Spanish officers and well to do passengers, most probably had their foods especially prepared for them using imported olive oil, garbanzos and olives from Mexico. The crew’s meals would have been prepared using lard, vinegar, rice, ginger, tamarind and other local spices, as well as soya beans and soya sauce added to flavor their meals. Their main source of nutrition was rice and the crew members probably had some meals of cooked rice or incorporated into stews.

Provisions were stored in a variety of containers and stowed in the hold, but jars were also evenly distributed and hung from the rigging on the main deck along the bulwarks. Salted meats, such as hams, were also hung from the rigging to preserve them rather than allowing them to rot in the hold. This may explain why galleons were generally followed by hungry sharks as they were aware of the flesh hanging from the rigging on these vessels. This was a problem in Spain, and no doubt, also in the Pacific. “On the ill fated 1622 voyage from the Indies, sharks began following one ship in the Caribbean. Evidently, haunches and slabs of meat hung from the railings of the poop corridors came within range of the sharks as the ship pitched violently

during a storm. Having tasted ham and salt pork, the sharks were willing to taste whatever else might come their way, and the terrified sailors could well imagine what would happen to them if they fell overboard. ”[154]

In the Philippines, it was a common practice to store the provisions in large, Asian clay and ceramic jars. The jars ranged in size and were mainly sourced from China and Southeast Asia. Water was also carried in large jars, as well as oil, vinegar, spices such as pepper, salted meats and fish and other food items. In Manila, it made more sense to ship them in this way, as it was necessary to prevent the food from being eaten by rats and insects, which could easily bite into sacks and contaminate the provisions. It was more difficult for the rats to enter into the jars, although it was possible for them to fall into a jar when attempting to drink or eat provisions. Other liquids and provisions were no doubt carried in barrels and in bottles.

The Dispenser (Steward)

The dispenser or steward had the responsibility of keeping the provisions under lock and key in the hold. As the position of dispenser was an important job on the vessel, he was selected for the post by the ship’s master. His primary function on the galleon was the distribution of daily food rations to the crew, but he was also in charge of making sure that the provisions were well maintained. As the dispensing of rations was such a problematic area on the ship, with crew members making sure that they received their fair portion of provisions, a soldier was always on guard when food was distributed to the crew.

With the assistance of the cabin boys, the dispenser distributed the provisions and meals to the crew which had been prepared by the ship’s cook. In the galley or cooking area would have been a variety of pots, frying pans, grills, mortar and pestle and a large cauldron and utensils used to prepare the meals. Food which was being prepared during the day and for particular meals were probably brought up from the hold as required. It is doubtful that any food would have been left lying about especially if the men were still hungry after their meals and the receipt of their food rations for the day. The cooking area or cookhouse was located on the lower deck. A brick lined pit, with sand at the bottom was constructed in the hold where the actual fire was lit using firewood. From above the pit, on the lower deck, the dispenser or cabin boys working for him lowered a cauldron or pots and pan onto the fire below and the meal was prepared.

Each crew member received the same proportion of food, which had been precisely measured out by the dispenser. He used measuring devices for this purpose including a scale, cup, bowl or wooden ladle. The easiest meal to prepare for the crew was a Spanish stew known as a “cocido.” The stew was prepared using water, meat, fish, chicken if

available, garbanzos, rice, vegetables, oil, garlic and condiments. It was cooked in the cauldron, and would have fed many crew members who supplemented their meals with biscuits, wine and water.

It seems likely that food was continuously being prepared during the day on the galleon and served on a shift basis to the crew. Given the fact that a typical galleon carried as many as two or three hundred men, plus passengers, it would have been difficult trying to serve them their meals all at the same time. For this reason, it seems likelier that groups of men were served their meals at given times during the day.

"Dining on a ship the size of the *Concepcion* (an Atlantic fleet vessel) would have taken place on three social levels. The food for the higher ranking officers and passengers was prepared by servants using the ship's firebox or braziers and was served to them on silver at tables in the great cabin or smaller cabins. The middle order of rank aboard ship dined from finer ceramic ware and pewter at tables set in the great cabin or on the decks, attended by servants. The lowest ranking persons aboard, sailors and servants and deck passengers, would eat alone or in small groups from a common bowl using their belt knives while seated on deck. Some would use pewter spoons if they owned them."[155]

As the Manila galleon carried so many Asian crew members, there was probably a larger quantity of rice and other Oriental foods carried on the ship for these men, who would not have enjoyed meals prepared with Spanish ingredients. The Asians were used to eating rice three times a day and consuming anything else at mealtimes would have been difficult for them to change their eating habits. A bit of stew on rice would have been a better meal for the Asian mariner. Other foods the Asians were accustomed to eating included coconuts and soya beans instead of the garbanzos and lentils consumed by the Spaniards.

The dispenser also supervised the preparation of the meals for the officers and the passengers. Their meals were prepared with the foods they brought onto the ship. With the assistance of the cabin boys, servants and slaves, the meals were served to the officers and the passengers. Their provisions were stored in the hold in a special and separate area from the crew's provisions, where each jar and packet belonging to them was marked with their own distinguishing marks or initials for easy identification. The dispenser would have used these ingredients for the preparation of their meals according to what they wanted to eat that day.

The captain, officers and passengers would have enjoyed daily cups of hot chocolate, sweetmeats, dried fruit, honey, nuts, raisins and other special foods they brought onto the ship. They also provided their own supplies of wine and brandy. The officers and the wealthier

passengers probably ate their meals off of fine china and drank their water and wine from glass goblets and used silver utensils to eat their meals. The crew and poorer passengers used wooden and terra cotta bowls and cups and simple utensils, if they had them.

Live Animals on the Ship

It was not unusual for officers and wealthier passengers to take live animals onto the ship as a source of food. Animals such as pigs, birds, egg laying hens and roosters were commonplace on most Manila galleons. The pigs were eventually slaughtered and provided meals for the officers and passengers and even leftovers would have gone into the stew pot for the crew. Egg laying hens provided a daily supply of eggs. In the Atlantic fleets, the ships regularly transported cows, sheep and goats to the colonies in the Americas or for slaughtering during the voyage. Around the Caribbean, galleons would take on tortoises as a food source. Horses were also transported, not as a food source, but for use in the colonies as a mode of transportation.

Evidence from the *San Diego* excavation indicates that the ship carried live animals on board. These included chickens, pigs and cattle. The skeletal remains of these animals have been found and identified by archaeologists. Thirteen jars were recovered from the *San Diego* site with the remains of meat. While the merchant vessels continued to carry livestock, in 1621 a Spanish law prohibited the carrying of livestock on warship galleons.

According to Careri, livestock was taken aboard the *San Jose* during the journey. At one point in the galleon's voyage, it stopped as it was going to the San Bernardino Strait at Albay, where the town's mayor came aboard the ship and provided the captain with a gift of twenty pigs, five hundred chickens and a great deal of fruit. The ship was probably incredibly crowded with cargo, provisions, passengers, crew and no doubt already had livestock on board, so where they put the additional animals was probably difficult to say and of course, the smells of all these creatures on the ship must have been tremendously unpleasant.

Catching Fresh Fish and Birds

During the journey, as the food rations became less palatable, the crew members resorted to supplementing their daily rations with fresh fish or birds they were able to catch. On the *San Jose*, whenever fresh fish was caught, it became a time of celebration aboard the vessel. They used fishing lines and hooks and harpoons to spear the fish and through this method were able to catch a variety of fish.

While Careri sailed on the *San Jose*, he amusingly wrote of how the men on the galleon were able to catch fish and then auction them off to bidders on the vessel. As the ship sailed north in the vicinity of

Guam, the sailors caught a fish the Spaniards referred to as a "cachorreta." The sailors sold the fish to the highest bidder, which turned out to be four sailors. Apparently, it was customary aboard the galleons to auction the fish caught by the sailors. As they continued fishing and caught even more fish, they began giving the fish away to anyone who wanted them. What is interesting about this episode is the fact that the men were supplementing their daily intake of food with fresh fish rather than depending solely on the rations provided to them. But it was also a form of entertainment for the crew members, as well as a way to supplement their meager incomes.

Use of Fire and Lighting on the Ship

One of the most dangerous situations which could occur on the ship was the outbreak of a fire. In order to minimize the possibility of a fire, the use of candles, oil lamps, lanterns and the cooking fire was carefully regulated, monitored and controlled. When the ship's cook was preparing meals, a soldier was assigned to guard the use of firewood for the stove and made sure that the fire remained contained and did not spread to any other areas of the ship. During storms or when the ship was sailing through turbulent waves, the cooking stove was not used as it was feared that embers or sparks from the firewood might set off a fire on the ship. Careri mentioned that when the *San Jose* sailed through heavy seas or a storm, all of the lit candles, lanterns and the cooking fire were extinguished. During these periods when the cooking fire could not be used, everyone on the ship had to make do with cold provisions of cheese and biscuits.

The dispenser was in charge of ensuring that he was the only person allowed to carry a lit lantern into the hold or light a fire in the cooking area. It was necessary to strictly regulate who was allowed to carry lit lanterns into various parts of the ship. The use of candlesticks and lanterns was also restricted on the ship and how they were used and where to provide lighting at night. Usually the ship's lantern, which was located at the stern end of the vessel, was lit throughout the journey at night especially if two or more vessels sailed together in a fleet.

The fear of a shipboard fire was dreaded by everyone as it could easily get out of hand and destroy the vessel and all who sailed aboard her. This was the case with the *Santo Cristo de Burgos*, which embarked from Manila in 1693, and disappeared in the Pacific after having left the Philippines for Acapulco. The ship had an onboard fire that led to its destruction. Charred pieces of the galleon washed up along the shores of the islands in the Marianas. Initially, there were six survivors, but in the end only two survived the tragedy, and they did this by eating the flesh of their dead companions. Even though they survived the ordeal and were rescued by Spanish vessels, they

had become mentally unstable after suffering through the ordeal they had experienced.

During the day, only the captain's cabin and the gundeck had natural lighting. The lower deck and the hold were in darkness, unless an individual such as the dispenser went into the area with a lit oil lamp. The individuals in the lower deck would have had the use of oil lamps which were hung from the ship's beams. The officers and the passengers were allowed the use of candlesticks in their accommodations.

Of the artifacts uncovered from the *San Diego* excavation site, there were a number of lighting implements which help to illustrate how lighting was supplied on the vessel. "Three types of lighting devices were used on the *San Diego*, although only the first two, candleholders and oil lamps, were found on the wreck. The third type was used on deck in the form of lanterns covered by panels made of bone, textile or glass, the purpose of which was to protect the flame of the candle inside the lantern from the wind. The oil lamps, which were reserved for the common interior spaces, are represented on the wreck of the *San Diego*. Candleholders which account for most of the illumination devices found on the wreck were placed on a table or held in the hand. Made of silver and more rarely of gilded bronze, many of these items belonged to the Spanish officers and aristocrats. The use of lamps aboard ship was strictly regulated and monitored on account of the risk of fire. Many ships caught fire on account of carelessly handled lamps, in particular the lanterns, some of which were made of flammable materials. One famous and tragic example is the *Nuestra Senora de Concepcion* off New Spain in 1552 following a fire sparked by a lantern which caused the death of more than 300 passengers." [156]

Health and Sanitation

Daily conditions on the vessel must have been overwhelming. Especially the various smells that emanated from the ship's bilge where all excess water managed to accumulate. As it remained at the bottom of the ship it turned into a toxic soup of bacteria and vermin. The concoction sat for weeks and months on end and emitted an awful stench that seeped into the rest of the ship and especially when the pumps were used to bring the foul water up and out into the sea. In addition to the smell from the bilge waste water, there were the animals on board the ship which were housed in pig pens or chicken coops on the main and gundeck. The smells emanating from the prow of the ship where the crews toilet was located, also were impossible to avoid. Added to all of these varying smells were the aromas of unwashed, sweaty bodies in filthy clothing. Then there was the constant preparation of meals, which may have been an unpleasant smell as well on the ship. In order to deal with the unpleasant smells,

the well to do passengers, carried pomanders and vials of perfume that they held up to their noses to camouflage the repulsive odors emanating throughout the ship. “Odors aboard ship were overpowering to the more sensitive noses. The more refined carried small metal perfume vials on chains around their necks. Filled with aromatic oils, they could be wafted during olfactory emergencies.”[157]

The health and sanitation aboard the galleon was a problematic area of concern to all who sailed on the ship. Taking care of one’s daily necessities, where physical cleanliness was concerned, was difficult especially for the female passengers and children on the ship. It was most probably necessary to fetch a pail of sea water and with soap and a sponge provide oneself with a very basic washing. It would have been impossible to use fresh water supplies for this purpose as it could only be used to drink. Bathing was out of the question for everyone on the ship as the facilities were not available. They had to remain without a bath for the six to seven months journey to Acapulco. Careri said that on *San Jose*, the sailors often swam in the sea if the weather was calm, but they had to quickly return to the ship if they spotted sharks. As they also stripped down during rainstorms in order to collect fresh water, they may have also used the opportunity to wash themselves.

The majority of the individuals on the vessel would not have been able to wash their clothing during the voyage. They had no choice but to reuse their daily attires or wear something else if they had a change of clothing available. Servants may have washed some small garments for their employers, using buckets of seawater and soap, but hanging these out to dry would have been difficult. However, some mariners managed to wash their clothing at sea. They first soaped up the garments and then lowered them by rope into the sea. In this way, the garments were rinsed and the soapy residue was removed. One reason why some decided not to wash their clothing at all may simply have been due to the fact that they thought the salty sea water might damage the fabrics. In any case, it appears that most individuals preferred waiting until they arrived in Acapulco to attend to washing their clothes and bathing.

The toilets the crew used were known as the ‘head’ on English vessels, as they were located at the front of the ship. In that area, a wooden platform jutted out from the side of the ship above the sea with appropriate round holes and serving as their toilet. It seems unlikely that the ladies on the ship would have used these inconvenient toilets and probably had chamber pots in their accommodations for their personal use which were then emptied by their servants. The same would most probably have been the case for the officers including the captain. They were all attended to by

servants and cabin boys, who were in charge of cleaning out their quarters and handling these sorts of duties. In fifteenth century Spanish vessels of Columbus's time, there was an overhanging platform at the stern of the ship with a toilet at either end, which were used by the officers on the ship. They were referred to for this reason as "jardines" or gardens.

With such a deplorable state of hygiene on the ship, it was clearly obvious that the spread of lice was an ongoing problem for everyone on the vessel. Itching, scratching and trying to find lice in one's clothing or bed linens, probably took up much of one's time on the ship. The vessel was also the perfect vehicle for the spread of diseases with rats and insects becoming a continuous problem on the ship.

Sickness and Diseases

The earliest problem encountered on the ship by passengers and novice crew members was sea sickness. The first days and weeks of the journey, must have been difficult for them as they passed the hours of the day in bed or at the ship's railing where they were continuously vomiting into the sea. If they remained in their accommodations, they needed pails and buckets to be sick into. One of the entertainments the crew had on the ship was watching the sea sick pigs as they fell and staggered about in their pens. To them, the animals were a comical source of entertainment, which only ended when the pigs were slaughtered and provided fresh meat for the officers and the passengers.

As the ship progressed to the north, nearer to Japan and then east to California, the people aboard the vessel began feeling the effects of the colder climate. By this time, many on the ship were already weakened and suffering from the cold, lack of fresh water, good food, and generally the exhausting voyage which seemed never ending. They could feel their strength ebbing away and many were beginning to get sick with colds which often turned into pneumonia. Most vulnerable of all would have been the Filipino and other Asian crew members who were not accustomed to colder weather unlike the Europeans on the ship. The closer the ship came to California and Mexico, the sick began dying and had to be thrown overboard into the sea. Before they were committed to the sea, the priest on the ship provided a brief service and recited prayers for the soul of the deceased.

The conditions found on the Manila-Acapulco galleons also applied to the vessels of the Atlantic fleets. "Mortality rates were high throughout sixteenth and seventeenth century Europe, but on board Spanish ships in Caribbean waters the situation was worse. Rates of fifteen to twenty percent of the ship's company have been noted as commonplace for a return trip from Spain to the Indies, and when

yellow fever or other tropical diseases took hold in vessels the mortality rate would spiral. In other words, life on board a sixteenth or seventeenth century Spanish galleon was similar to that in the plague infested and overcrowded cities at home, with the added risk of death through battle or shipwreck, and the further added risk of encountering exotic tropical diseases. "[158]

The fact that the officers, crew and passengers were eating a diet high in salt during the voyage probably led to maladies other than malnutrition. After two to three months at sea, the individuals on the galleon would have begun to see the start of ailments due to their poor nutrition and lack of fresh foods. These would have included symptoms related to renal and kidney difficulties as the foods they ingested were so salty and preserved in salt or brine for the long journey. They probably suffered from high blood pressure, hypertension, stress, heart disease, skin diseases, as well as scurvy and beriberi. They also suffered from water born ailments such as intestinal disorders brought about by bacteria and parasites.

One of the main afflictions they suffered from was scurvy, which was also known as the "Dutch disease." The disease occurred when there was a lack of fresh foods such as fruits and vegetables that contained vitamin C (ascorbic acid). Ascorbic acid is used by the body in the production of collagen. If these food items were unavailable for approximately six weeks, the individuals on the ship began to feel the effects of the progressive disease. At first the individual began to see spots and sores on his legs and thighs. His gums became spongy and his teeth became loose in the mouth which was ulcerated. He may have begun to experience a bloody nose and his overall appearance was of someone who was obviously ill. The remedy to the ailments was fresh citrus fruits and vegetables, but if these were not available, the disease progressed until the individual died.

The other disease which affected many on board the sea vessels was beriberi. This ailment caused fatigue, nervousness, and bloating, cardiac and gastrointestinal problems. The individual usually died in a confused and rambling state of mind. The ailment was caused by a lack of vitamin B1 which can be found in fruit, vegetables, beans, cereals, bread and meat.

Ship's Surgeon (Cirujano) and Medical Treatments

Normally, there was at least one surgeon on each galleon. He administered to the sick and dying, as well as preparing medicines and performing operations on those individuals who were in need of the removal of a limb during sea battles. As the ship was continuously in motion, it was not uncommon for crew members to have work related accidents which also were attended to by the surgeon. Many accidents occurred as sailors climbed the rigging to the yards and fell down in

the process.

As a surgeon, he had to know how to mix ingredients used in medicines and therefore, also served as a pharmacist. The ingredients were usually based on herbs and other plants. The surgeon would mix the ingredients using his mortar and pestle and scales to create syrups, ointments, purgatives and powders used to treat ailments.

Originally, the surgeons were barbers and known as “barber surgeons.” From that earlier role as a type of hairdresser, he evolved into a surgeon as he had to handle various types of equipment and supplies which included an assortment of knives, saws, scissors, syringes, cauterizing iron, “brasero” a type of small stove, spoons, funnels, spatulas, hoses for enemas and other implements which were used to perform operations. He was also supplied with cloth for bandages and dressings. When someone complained of a malady, the surgeon tried to find a remedy to the problem offering various treatments and medicines.

Up to the nineteenth century, surgeons thought that the human body was filled with fluids which caused diseases. They were known as the “four humors,” and consisted of black bile, yellow bile, phlegm and blood. This was a very old concept that originated during the time of ancient Greece and Rome. The concept was created by Hippocrates. Each humor had its own distinguishing characteristics. For example, yellow bile was associated with the gall bladder, summer time, the element of fire and caused an individual to be bad tempered. Phlegm was associated with the brain and the lungs, the winter season, and led to the individual being unemotional. Blood was associated with the spring and the liver and the individual was often optimistic and brave.

When an individual was sick, it was thought that there was an imbalance of one of the four humors and therefore, the patient had to undergo the process of “bloodletting” or the extraction of blood through a vein. In this way, the surgeons thought that the patient’s equilibrium would be restored and the individual would be healed. They did not understand the connection between bleeding and the fact that during the process the patient became debilitated and often died as a result. When the patient was bled, the surgeon usually cut into the individual’s vein in the arm and placed a bowl underneath the limb to collect the blood. Another favorite treatment for individuals who appeared to have an imbalance of one of the humors was the common use of enemas. Again, the point of treating the patient with an enema was to release the ill humors infecting the body.

When the ship was under attack by an enemy vessel, the surgeon would normally perform operations in the lower deck, below the gun deck, and away from the action of the gunners and soldiers. The

surgeon was often assisted by apprentices and cabin boys, as well as by members of the clergy who administered to the spiritual needs of the sick and dying while the surgeon attended to the repair of their bodies.

When the galleon neared California and Mexico, a greater number of people on the ship began dying. They were so debilitated by the rigors of the voyage and malnutrition, that they were unable to survive the journey. On one galleon in the mid-seventeenth century, also known by the name of *San Jose* (but not the vessel on which Careri travelled, but another similarly named ship), everyone died during the voyage. It was thought at the time, when the vessel was found by the Spaniards that the individuals on the ship died of starvation.

The galleons were provisioned with a special diet for sick individuals on the ship. The provisions were kept in the hold, but apart from the daily foods for the crew. They consisted of meat, chicken, eggs, raisins, sugar, almonds and broth. It was up to the surgeon to provide the sick individual with the special diet. If the individual continued to be sick, and the ship came to a port, the person was usually taken to a hospital or a religious institution such as a mission church, where he was left to restore his health.

If a passenger or crew member died on the vessel, the priest provided a short service and prayed for the individual's soul. After the service, the dead person, who was wrapped in cloth, was released into the sea. If the dead individual was a sailor, his personal possessions were sold and the proceeds from the sale were turned over to his widow and family.

Rats, Mice and Insects

In addition to all of the hardships the passengers and crew members had to endure during the voyage, they also had to contend with the presence of a multitude of rats, mice and insects on the ship. The rats and mice thrived and multiplied quickly in the hold. Not only did they pose a health hazard to the humans and animals carried on board the ship, they also threatened the maneuverability of the vessel as they gnawed and chewed the ropes and rigging which kept the ship on course. They also got into the water and food stores, contaminating both. No doubt many of the passengers on board the vessel were alarmed by the roaming rats on the vessels. A traveler on an Atlantic fleet galleon of the 1600s said of the rats on the ship, "To see such a multitude of rats frightened everyone, for they were all over the ship in great numbers." [159]

At times, catching rats became a form of entertainment with sailors hunting them down. However, if their populations got out of control and grew to such proportions that they led to a life and death

situation for everyone, then a serious campaign took place to immediately exterminate them. One case in point was the situation on the galleons of the Atlantic fleet of 1622, when they were being prepared in Havana, for their return journey to Spain. At that time, it appeared that all of the vessels in the fleet were infested with rats. Approximately 1,000 were killed on the *Nuestra Senora de Atocha*, while on another vessel 20,000 rats were exterminated.

But despite the fact that having rats and mice on a ship had become almost expected and unavoidable, probably the most annoying problem for those on the ship was the infestations of lice. The lice spread quickly and could be found in one's hair, clothing and bedding. As it was difficult for anyone to bathe on the ship, and they had to wear the same clothing day after day, it was almost impossible to eradicate the lice which had the capacity of easily spreading from one individual to the other. As a result, most individuals were reduced to a continuous round of twitching, itching and scratching. They tried using a comb to remove lice from the hair, but as the insects were everywhere on the ship, it was a pointless exercise.

In addition to the lice, there were other types of insects on the ship and these included cockroaches of every size and description, as well as spiders and bedbugs. It was also not unusual to find that after several months at sea, the biscuits used in food rations for the crew were often infested with worms and maggots. It was an intolerable situation, but the crew had to survive and ate whatever provisions they received even if they were unpalatable. As one traveler described the uncomfortable galleon voyage, he recalled, "…those floating dwellings, where most of the time the bedbugs mistreat you, the galley slaves rob you, the sailors offend you, the rats destroy you and the motion of the sea wears you out." [160]

Recreation and Entertainment

The voyage from Manila to Acapulco was an exhausting and monotonous experience for all aboard the vessel. However, there were times when the crew and passengers found ways to entertain themselves other than telling stories and general conversations. For example, the officers and passengers organized onboard musical performances with singing and accompanied by guitars, drums and flutes. They also performed plays by well known Spanish playwrights and dances. These were performed on the main deck even though space on the deck was often cramped as it was crowded with cargo. Many on board turned to playing card games and gambled with dice if they were allowed to by the officers and clergy on the ship. According to the House of Trade, gambling on the ships was prohibited, but the officers often looked the other way when the sailors were involved in these activities. The officers and passengers played chess. Two ivory

chess pieces, which would have been from an expensive chess set, were found on the *San Diego* excavation site. There were also evenings when passengers read out loud from a novel or a book about the lives of the saints.

Carreri noted that as a diversion the people on the *San Jose* entertained themselves with cockfighting. There were so many chickens on the ship that after the cockfighting episode, they ate those killed as there was little else to eat in the way of meat. Even though there were other animals on the ship, they were the property of the officers or wealthy passengers, so that not everyone had the opportunity to eat meat during the journey.

If the sea was calm, another form of diversion for the sailors was swimming, but they quickly returned to the ship if they spotted sharks. They also fished for food and pleasure and enjoyed shooting weapons as a form of entertainment. Some crew members organized rat and spider races or placed bets on the type of weather they might encounter as they sailed across the Pacific. Even the members of the clergy were not exempt from finding ways to entertain themselves. They organized religious services and celebrations to commemorate the saints or other holy days. Friar Thomas Gage described the religious activities that took place on the *Santa Gertrudis*, one of the vessels in the convoy he journeyed on from Spain to Veracruz in the seventeenth century. On the ship there was a company of Jesuits who celebrated the founding of their order by St. Ignatius. The ship was decorated for the event with banners and paper lanterns as the Jesuits strolled around the main deck singing hymns, while the sailors fired guns in honor of the saint.

On another saint's day, Friar Gage said that a meal of fish and meat was served to everyone on the ship, and that the dinner was followed by a comic play by the renowned sixteenth century Spanish playwright and poet Lope de Vega (1562-1635). The roles in the play were acted out by the friars and soldiers. Apparently the play was a great success even though it was performed on the confined and crowded main deck.

The passengers brought books to read and writing materials to write letters or kept a journal of the voyage and in this way, they occupied the many boring hours on the vessel. Evidence of writing materials such as a pen and two inkwells with dredgers were found on the *San Diego* wreck site. One of the inkwells was made of bronze and the other one of alabaster. There was also a Japanese ink stone used in calligraphy which probably belonged to one of the Japanese Samurai on the *San Diego* when it sank.

When the weather was calm and the ship was barely able to sail, the sailors turned to doing maintenance jobs. They mended sails, repaired

ropes, added new pulleys, and repaired the hull. Others fell in love with female passengers and in the pursuit of their loved ones, they occupied much of their time on the vessel.

Religion

Given the fact that all of the Spaniards on the vessel were Catholics, religion played a major role on the ship. The galleon was often named after a patron saint that was expected to protect the ship during its journey. As there were always a number of religious men on the galleon, they would have been involved in providing a daily mass or short prayer service for the continued safety of the vessel. The clergy members represented the various orders they were associated with such as the Franciscans, the Jesuits and the Dominicans.

The priests also attended to the spiritual needs of those on the ship who required their help. If they were frightened by the voyage, the priests and missionaries provided them with comforting words. During confrontations with enemy vessels, the priests provided words of encouragement and held services on the ship before the commencement of a battle. When men died as a result of a battle or through sickness, they were given their last rites by the priests.

Criminal Activities, Discipline and Justice on the Ship

Maintaining discipline on the ship was crucial. It would have been difficult sailing the vessel without ensuring that discipline and order was part and parcel of each given day. The officers, who were in charge of operating the vessel and the crew members that reported to them, all had to carry out their orders or face the consequences. The most common problem aboard the vessel, with its confined spaces, was the outbreak of arguments and fights amongst the men. It was necessary to make sure that one's shortness of temper or dislike for another crew member was not carried to such an extent that it resulted in an actual physical confrontation. As most crew members carried knives tucked into their belts, they could easily be employed as weapons. As a result, it was not unusual for knives to be used against each other during fights. In these cases, the officers had to deal with each of the individuals involved and issue punishments as warranted.

"The lack of private living space was probably one of the most important factors in fostering the aggressiveness that many of the sailors relished. Common daily occurrences included disputes about finding a good place to sleep that was level and dry, which was not very easy on a ship, and knife fights over a place to put one's few belongings. At the same time, work on the ships alternated between phases of extreme agitation and long periods of boredom. Moreover, in port the masters tried to keep the sailors enclosed in their wooden

jails in order to avoid desertions, and this enforced inactivity provoked an irritability that translated into physical violence." [161]

Other problems erupted when someone cheated while playing card games. This often led to a host of problems for the individual who was doing the cheating. On the Atlantic fleet vessels, if the man committing the offense was a sailor, he would have been tied to a cannon and whipped. If the culprit was a soldier, he had to run the gauntlet.

Regulations passed by the House of Trade, indicated that mariners serving on their sea vessels were prohibited from cursing and blasphemy. Those men who broke the regulations were punished for fifteen days by only being allowed to eat bread and water. Repeat offenders had their tongues pierced with a hot poker as a punishment. Anyone found drunk was chained up for four days and put on rations of bread and water. In 1608, the king passed a royal order stating that no mistresses or slaves were permitted on the galleons. If they were found on the vessel, they were confined to an area in the ship and turned over to port officials.

Another problem on the vessel was thievery. It was not uncommon for some crew members to help themselves to the possessions of other mariners on the ship including those of the officers and passengers. Moreover, there were officers who were involved in pilfering supplies and equipment that they planned to sell for a bit of extra money. Normally, these individuals were working with the same supplies and equipment that they were planning to steal. For example, the carpenter stole some wood, while the dispenser took provisions. If they were caught, they were punished, but as the officers were also involved in these practices, it seems unlikely that those committing the petty thefts were penalized.

"Among the criminal activities on the ships, robbery was the most frequent. For that reason, it is no wonder that one of the best authors of navigational books advised people always to be as quiet as possible on board ships, so that one could hear the blows produced by someone trying to break open a barrel or unlock a strongbox. Of course, if passengers were careless in watching their money, they might as well have left it behind in the port of their departure – because they would lose it in no time on board. Still, what occurred most frequently were small thefts of food to compensate for the monotony and scarcity of the rations of pilfering of rigging and reserve equipment on the ship that could be sold upon arrival at a port. Some passengers with a sweet tooth carried boxes of sweets with them and this was too powerful a temptation for many. In all fairness we should recognize that a crew might contain abundant pilferers, petty criminals, or cutpurses without having the right to be called

thieves in the full sense of that term. "[162]

Crew members were not the only ones on the vessel who became embroiled in some activity that warranted punishment. For example, Careri said that one passenger on the *San Jose* was punished by the captain. The passenger in question became involved in an argument with an assistant pilot, who was apparently providing him with his daily meals in return for a sum of money. The passenger complained that the meals the pilot provided to him were too meager. During an intense argument between the two men, the assistant pilot slapped the passenger and chased him with a knife. The captain was compelled to handle the fracas and punished the two men. They both had to stand for many hours in the hold, near the bilge, which was considered a terrible sentence as the area was filled with noxious fumes.

One of the continuous problems faced by the House of Trade and the sea vessels was the proliferation of smuggling and contraband goods taken onto the ships. Careri mentioned that on the *San Jose* the captain initially loaded onto the ship 1,000 jars of water before it embarked from Cavite. During the early stage of the voyage, while the ship was still in Philippine waters, the jars were searched to see if there were any contraband goods hidden inside the jars which should have contained only water. When the jars were searched, they found smuggled pepper, porcelain and other items of value inside the containers. The undocumented goods were thrown overboard.

Smuggling was a persistent problem with officers and crew members involved in carrying undocumented goods on the vessels. Even though the House of Trade considered these activities as crimes, they were never quite able to eliminate smuggling. When the galleon arrived in Mexico it was searched after the cargo was removed from the ship to ensure that no hidden merchandise was still on the vessel. Moreover, the galleon's register was carefully checked to guarantee that everything listed on the document was indeed on the vessel and that no unregistered goods were brought into Acapulco. This was an attempt to stop smuggling, but also to ensure that the royal treasury received all of the duties and taxes owed to it. Any unregistered cargo was confiscated and later sold with the proceeds turned over to the royal treasury. Smugglers had to pay fines and also faced having their own personal possessions and estates confiscated by the government.

The rules and regulations passed by the House of Trade were basically applied to all crew members. They received the same punishment if they were caught committing an offense. Punishments could consist of flogging or being put in chains or shackled, as well as having to pay fines. The ultimate punishment for a serious offense was death.

Chapter 14

Arrival in Acapulco (Ciudad de los Reyes)

Without the presence of a galleon at the port, Acapulco was just a sleepy backwater town. Initially, it began its existence as a small fishing village, but with the advent of the galleon trade run, Acapulco gradually grew to the status of a “city” during the sixteenth to the nineteenth centuries. However, it was never as great an economic center as Mexico City or Lima, Peru. It simply retained its importance to the Spaniards as a temporary trade hub for the galleons and other sea vessels that arrived there during the year. At those times, the city became quite active for a few months, but when the galleon departed from the port, Acapulco went back to sleep.

Consequently, rather than actually calling Acapulco a city, it was clearly more of a small town than anything else during its existence under the Spanish colonial period. In fact, Acapulco was not officially recognized as a “city” until many years later on November 1, 1799 when Charles IV issued a royal decree which announced Acapulco’s new status. In any case, to the Spaniards, Acapulco was known as the “Ciudad de los Reyes,” or the “City of the Kings.” It was distinguished by that appellation as it had become important to the Spanish realm as a port and shipyard, connecting the East with the West, through conquest and trade. While it was still just a non-descript fishing village, Acapulco first came into prominence during the sixteenth century when Hernan Cortes, the conqueror of the Aztecs in Mexico City (1519-1521), began to take a greater interest in the countries of the South Seas.

As Acapulco was located on a sizeable and deep bay, Cortes selected the town for the establishment of Mexico’s first proper shipyard. In the shipyard, he envisioned the construction of vessels that could sail across the Pacific from Mexico to Asia. Cortes was interested in continuing the discoveries that Magellan’s 1521 expedition had begun in Southeast Asia and particularly in the Philippines. He was operating under the impression that the countries of Asia, including China, could be easily conquered by Spanish conquistadores. With the successes they had achieved in Mexico, they arrogantly thought that they could duplicate these achievements in Asia. At that point, they thought that they were invincible and great tacticians.

With these exploratory goals in mind, the Spaniards established their presence in Acapulco in 1530. They had also set up shipyards at other locations along Mexico’s west coast to handle sea vessels traveling to Central and South American ports such as Callao which

catered to Lima, Peru, and Guayaquil, Ecuador. The other Mexican ports consisted of Navidad, Tehuantepec and Zihuatanejo. At the Zihuatanejo shipyard, the vessels used in the Alvaro de Saavedra expedition of 1527 were constructed and embarked from there to the Philippines.

The port of Navidad, and its shipbuilding facility, was very basic and not as extensive as the shipyard in Cavite. The town was founded on December 25, 1540 by the Spaniard, Juan Rodriguez Cabrillo. He arrived in Navidad to organize the construction of the vessels employed in the Miguel Lopez de Legazpi expedition to the Philippines of 1564. The vessels consisted of three galleons and two smaller tenders. After the shipbuilding facilities were moved to Acapulco, there's no evidence that Navidad, which had a small harbor, was used to construct further galleons for the trade run to the Philippines. In any case, while the ongoing construction process was underway at Navidad, the port city, for a short period of time, became prominent.

Enormous amounts of raw materials, equipment and provisions had to be supplied for the construction of the vessels. "When the first galleons for the Manila-Acapulco run were constructed under the orders of Viceroy Luis de Velasco between 1557 and 1564 in Navidad harbor in Mexico, the wood for the hulls came from the Isthmus of Tehuantepec, the fabric for the sails was ordered from Veracruz and the ropes were imported from Nicaragua. The hull was protected by a lead covering in order to prevent its being affected by tropical mollusks." Moreover, it was necessary to find workers, both natives and Spaniards, to carry out the building of the vessels, as well as men to form the crews when they were ready to sail. [163]

Nearly all of the shipbuilding activities along the west coast of Mexico were eventually moved to Acapulco. When the shipyard was initially established there, its first construction project was the building of two caravels. Although the vessels were owned by Juan Rodriguez Villafuerte, they were purchased by Hernan Cortes for the expedition he organized to the South Seas. The vessels were named the *San Miguel* and the *San Marcos*. By 1531, the construction process was completed and the ships were ready to sail. They embarked from Acapulco on June 30, 1532, under the command of Diego Hurtado de Mendoza. After the expedition arrived in the Marianas, Diego Hurtado de Mendoza died after one of the ships was wrecked in that area.

It was interesting to note that the shipwrights decided to construct two caravels, as they were vessels which were small and easy to navigate. The caravel was originally developed by the Portuguese in the fifteenth century to explore the coast of West Africa. They were constructed with two masts and lateen triangular sails, which enabled

the vessels to travel at a faster speed than the larger galleons, which were equipped with three masts and squared sails.

After this first expedition, other vessels were constructed in Acapulco for various expeditions including exploratory missions along the coasts of northern California. Acapulco became the main center for the construction of sea vessels on Mexico's west coast. The shipyard, however, was never as large or as diversified as those found in Havana, Cartagena or Cavite in the Philippines. But clearly, it was possible to construct large sea vessels in Acapulco, even though it appears that the majority of the ships used in the Manila-Acapulco trade run, were constructed in Cavite or in other ports in the Philippines.

Although the town was basically used as a shipyard by the Spaniards, it was not until 1550 when it became a Spanish enclave. At that time, Fernando de Santa Ana, who was one of the first Spaniards to settle there, arrived in Acapulco with thirty Spanish families. However, the number of Spaniards who resided in the town over the years was few and mainly consisted of government officials, soldiers, members of the church and missionaries. In addition to the Spaniards, there were Mexican natives and Chinese who most probably arrived there on the galleons. According to Alexander von Humboldt, who visited South America and Mexico, the population of Acapulco throughout its history remained low with only 4,000 residents in the town when he visited the country during the nineteenth century. However, when the galleon arrived in the port from Manila, a yearly trade fair was held and at that time the population doubled in size. People arrived in Acapulco from throughout Mexico, as well as from Central and South America to purchase goods from the Orient.

Apparently, there were several reasons why so few Spaniards lived in Acapulco on a permanent basis. These included the fact that the hot desert-like environment was inhospitable and proved difficult for many Spaniards to remain there. The other reason was the problem involved in obtaining food and other necessary items in the area which had to be brought to Acapulco from Mexico City. Moreover, there was a lack of fresh water in arid Acapulco, and the area was also plagued by poisonous snakes and scorpions.

Gemelli Careri said that Acapulco was clearly a difficult place for Europeans to live in for any length of time. Understandably, most Spaniards found that it was easier to live in Mexico City rather than at the port city. He also said that Acapulco had a bleak atmosphere and that this was due to the, "… ill temper of the air and the mountainous soil … Acapulco must be supplied with provisions from other parts and therefore it is dear living there, besides a man cannot eat well under a piece of eight a day. The place besides being dear is dirty, and

inconvenient." Humboldt had this to say of the port city, "Acapulco is one of the unhealthiest places of the New Continent. The unfortunate inhabitants breathe a burning air, full of insects, and putrid emanations. For a great part of the year they perceive the sun only through a bed of vapors of an olive hue. The heat must be still more oppressive, the air more stagnant, and the existence of man more painful at Acapulco than at Veracruz." To the Spanish governor of the Philippines in the eighteenth century, Simon de Anda, he thought that Acapulco was an "inferno" where the climate was so hot that it posed a danger to Europeans who were also exposed to many earth tremors and earthquakes. [164]

By 1614, the town of Acapulco resembled many Spanish settlements in the Americas. It was composed of a number of small, ordinary houses, and around a central square, was a church, several government buildings, a hospital and a Franciscan convent. Along the seafront was a star shaped fortified citadel, which was constructed to protect the town when enemy vessels sailed into the port. When Careri described the rustic little town he found on Mexico's west coast he said that, "As for the city of Acapulco, I think it might more properly be called a poor village of fishermen, than the chief mart of the South Sea and port for the voyage to China, so mean and wretched are the houses, being made of nothing but wood, mud and straw." [165]

The galleon trade, as mentioned in earlier chapters, began with Miguel Lopez de Legazpi's expedition to the Philippines and the returning ship from Cebu, the *San Pablo*. As the vessel carried a cargo of 50,000 pounds of cinnamon, it was considered the first galleon of the trade run between the Philippines and Mexico. When Navidad was selected as the site for the construction of the vessels for the expedition, his chief pilot, Fray Andres de Urdaneta, thought that it was not a good choice as he preferred Acapulco. "The preparations were delayed more than reasonably expected, up to November 21, 1564, when the expedition finally sailed. The difficulties were numerous and complex since, as Urdaneta had already indicated in 1561, Puerto de Navidad did not have the conditions required to fit out an expedition of this magnitude." [166]

Even though Acapulco became Mexico's main hub for the transpacific galleon trade, there were government officials in the capital who proposed the selection of another port. However, Fray Andres de Urdaneta was the greatest proponent for the continued use of Acapulco as a port and shipyard. He thought that Acapulco far excelled any of the other ports along Mexico's west coast, as it had, as far as he was concerned, a healthier climate than Navidad. If this was the case, we can well imagine the conditions in Navidad, in comparison to Acapulco, which already had a reputation as being a

difficult place to live. In any case, Urdaneta stressed the fact that the port had a fine harbor which was both secure and deep. As such, it was better able to accommodate the larger galleons. Moreover, it was a better anchorage for ships during stormy weather. He noted that Acapulco was located closer to Mexico City than Navidad, and it was easier to obtain supplies and manpower there than elsewhere. He was so adamant about the matter that he wrote a letter to Philip II in which he recommended the retention of Acapulco as Mexico's main Pacific seaport.

"The argument presented by Urdaneta in favor of Acapulco instead of Puerto de Navidad is based on criteria identical to those that were taken into account in those days when considering the location for a new port. He evaluated the salubriousness, the size, depth of the water, the logistics - possibility of planting hemp for cordage, and trees to provide timber for the hulls – and above all land transport. One must bear in mind that in that epoch the most sophisticated equipment, especially arms and ironworks, had to come from Castile to Veracruz in the Caribbean, and from there overland to the Pacific. The distance from Veracruz to Puerto de Navidad is more than double the distance to the port of Acapulco. " [167]

The Isla de la Roqueta divided the Bay of Acapulco into two channels. To the east of the Isla de la Roqueta was the Boca Grande (large mouth) channel, which was the wider opening into the bay and was the primary entry way for the arriving and departing galleons. On the other side of Isla de la Roqueta, to the west, was the Boca Chica (small mouth) channel, which was not as heavily used by sea vessels.

When the galleon passed through the Boca Grande into the bay, it was able to anchor there without any difficulties as its deep water was able to accommodate numerous vessels at the same time. After confrontations with British, Dutch and French pirates, who posed a continuous threat to the town and sea vessels, it was necessary to construct a fortification to defend the sea vessels at the port and the residents of the town against enemy encroachments. When the Pacific trade run began, the Spaniards were not able to keep these activities a secret and realized that enemy vessels would attempt to capture one of their treasure ships.

As early as 1582, it had become apparent that Acapulco needed to have a fort to protect the galleons and guard against confrontations with pirates and privateers. When Spanish officials in Mexico City and in Acapulco petitioned Philip II for permission to construct a fort at the port, his response was that there were no funds available for the project. Apparently, the funds that the Royal Treasury possessed in Spain were needed to finance various conflicts that Spain was involved with in Europe.

The urgency concerning the need for a fortification in Acapulco changed when the *Santa Ana* galleon failed to arrive at the port. It was only later that the Spanish officials in Acapulco learned that the galleon had been captured by Thomas Cavendish. With only two vessels: the *Desire* and *Content*, Cavendish was able to intercept the galleon off the coast of Baja California on November 1587, as it sailed to Acapulco from Manila. As a result of this episode, officials in Acapulco realized the necessity of constructing a military fort to reinforce its defenses. But it took almost twenty-seven years before they actually got around to building the structure.

In a 1614, a Dutch engineer, Adrian Boot, was commissioned by Viceroy Diego Fernandez de Cordoba, Marquis de Guadalacazar in Mexico City to design and construct a fortress that could provide the protection the ship commanders required and the townspeople urgently wanted. After the construction project was completed, an engraving by Adrian Boot provided an indication of what the town and fort looked like at that time. The sketch shows that the fortified citadel of Acapulco had already been constructed along the shore and that it was operational by 1618.

The citadel was designed in the shape of a pentagon with an outer and inner wall, parapets, bastions, and a stone bridge located over a moat leading to the fort's main entrance. The defensive structure was known as the Fuerte de San Diego or Fort San Diego. Inside the fort, there were various military buildings including barracks for the soldiers. As a result of the ongoing piratical threats in the Americas, the fort was heavily armed and manned by seventy soldiers. Atop the walls forty-two cannons were in position to defend the structure and the bay. If an enemy vessel approached and posed a threat to the town, the residents of Acapulco trooped into the fort for protection. Although Fort San Diego was destroyed by a severe earthquake in 1776, which also devastated the entire town, it was replaced by a similar fort during the years of 1778 to 1784. However, the new fort was relocated to a hilltop overlooking the town and the bay.

One of the town's first confrontations with pirates took place on October 11, 1615, when a fleet of six Dutch vessels arrived at the port. The fleet, which was commanded by Admiral Joris van Speilbergen, sailed from Holland to South America where it was involved in attacking and looting Spanish settlements. Upon entering the bay of Acapulco, Admiral Speilbergen flew a white flag of peace as he was only interested in obtaining provisions for his vessels and not in an altercation with the Spaniards. Under the circumstances, the Spaniards allowed him to anchor his vessels at the port and provided provisions and medical care for the sick crew members on his vessels.

Admiral Speilbergen paid for the provisions by turning over to the

Spanish Governor of Acapulco, Don Gregorio de Porreo, prisoners he had captured during his raids in South America. The interaction, between the Spaniards and Dutch, remained calm and without any conflict. Eventually, Admiral Speilbergen and his vessels sailed away from the port on October 18, 1615. They headed towards the Philippines, where they hoped to capture the Manila galleon. Fortunately for the Spaniards, Admiral Speilbergen was unable to carry out his plans of seizing the vessel and instead returned to Holland.

Interestingly, Admiral Speilbergen wrote of Acapulco saying, "This town of Aquapolco (Acapulco) has no abundance of food supplies, since they have to fetch everything from very far in the interior, and also because all the ships from Manilles (Manila) take in their cargoes and provisions here. Wherefore we were surprised to receive such kindness and courtesy from the Spaniards, contrary to their usual manner and custom, for although we should have attacked them with force of arms, and have managed to overcome them, this would not have availed us aught, since they had means for getting away from the town, and escaping with all they wished into the woods and wilderness." [168]

Additional confrontations with enemy vessels occurred during the years after the construction of Fort San Diego. These included the appearance of another Dutch fleet on October 28, 1624. However, after seeing that the galleon was not in the port, the enemy vessels sailed away from Acapulco. This was followed by the arrival of vessels under the command of an Englishman, Captain Townley. The fleet entered the bay in November 1685 with the intention of capturing a vessel that was sailing to Lima, Peru. When Captain Townley spotted Fort San Diego's cannons, he sailed away rather than becoming involved in a gun battle with the Spaniards over the ship he was interested in capturing. Another familiar Englishman, William Dampier, arrived in the bay in January 1704. He and his fellow privateers attacked the incoming galleon from Manila the *Nuestra Senora del Rosario y San Vicente Ferrer*.

Dampier spotted the galleon as she passed the area of Colima, Mexico. The commander of the galleon was surprised to see Dampier and his fleet of ships. A battle ensued with the Englishmen and their vessel the *St. George* which bombarded the Spanish galleon. The cannon balls reached their target and damaged the *Nuestra Senora del Rosario y San Vicente Ferrer*. The conflict took place so quickly that the galleon had little time to respond to the enemy gunfire, but somehow she managed to survive the attack. The Captain General of the *Nuestra Senora del Rosario*, Teodoro de San Lucas, ordered the firing of his 18 and 34 pounder guns at the *St. George*. The British vessel was heavily

damaged and in danger of sinking. As a result of this onslaught, and the possible loss of his ship, Dampier decided to sail the *St. George* out of range of the *Nuestra Senora del Rosario's* guns. In the meantime, the galleon continued on its voyage to Acapulco and arrived there without any further incidences.

The Spanish administration, which governed Acapulco, was headed by a "castellan" or mayor. As such, he was in charge of Fort San Diego, as well as managing the town that grew in response to the galleon trade. Eventually, the mayor's position was elevated to the status of deputy governor and then to governor in 1769. He was in charge of all details connected to the administration and operation of the galleons at the port, and the trade fair, when it was organized and in operation. At times, the viceroy in Mexico City sent a government official known as a "visitador," to inspect the town's facilities and management. He was especially interested in the activities involving the galleons such as the collection of customs duties. The visitador was also interested in the cargoes carried by the galleons and whether or not smuggled goods were contained in the vessels. In that case, the smugglers would have been apprehended and punished by the government. When the visitador was in Acapulco, all of the other government officials in the town, including the mayor, had to answer to him. He became for a brief period of time the chief administrator of Acapulco.

There were office buildings in the town to house the various government departments especially those representing the Royal Treasury in Mexico City. The government officials carried out the inspection process of the incoming galleons and the collection of customs duties. In 1593, a special accountant was sent to Acapulco to represent the Royal Treasury in Mexico City, and to handle all matters concerning the galleons. This was followed in 1597, with the establishment of government offices which were operated by customs and procurement officials in Acapulco to handle all financial matters of the port including the purchasing of all supplies, equipment and provisions for the vessels that were prepared for the voyage to Manila. Except for the mayor of Acapulco, many of the customs officials probably returned to Mexico City after the galleon departed from Acapulco, and only returned to the port city upon the arrival of another galleon.

The Galleon's Arrival at the Port of Acapulco and the Customs Inspection Process

As the galleon approached Acapulco, sentries atop the hills surrounding the town were able to spot the vessel as it sailed towards the port. They immediately notified the mayor that a vessel was approaching the bay. He, in turn, dispatched a small boat to the

galleon to pilot the ship into the harbor. By sending the small boat to the galleon, it was also an attempt to ensure that no other vessels tried to approach the ship as it sailed into the port. Of course, the mayor and the customs officials wanted to make sure that unregistered goods on the galleon were not off-loaded before it was actually anchored at the port.

The ship entered the bay through the Boca Grande channel and came as close as it could to the shore of the port where it dropped its anchors and was moored. In the meantime, the vessel was saluted by cannon fire from Fort San Diego as a welcoming gesture to the ship and all who sailed aboard her. No doubt the ship's crew and passengers were relieved to actually arrive in Acapulco – knowing that they had survived the six to seven months journey across the Pacific.

When the galleon anchored at the port, it was the start of celebrations throughout Mexico as Spaniards rejoiced that the vessel had safely arrived in Acapulco. Church bells rang throughout Mexico City, and there was much merriment in the streets of the capital and in Acapulco. The galleon usually arrived in Acapulco in December or January depending upon how well the ship travelled and the weather that it encountered along the way.

When the galleon was moored, the ship had to undergo a bureaucratic process of paperwork before anyone could leave the ship or the cargo was unloaded. After the long journey to Mexico, the crew and passengers were weary, but they had to wait until the ship's register was scrutinized by the customs officials. In the meantime, as the Spaniards in Acapulco realized that many on the ship were probably suffering from the effects of scurvy, they sent baskets of oranges and lemons to the ship for distribution amongst the individuals in order to begin restoring them to health. Everyone knew of the threats of contracting scurvy during the long journey and that the consumption of citrus fruits cured the malady.

The mayor, along with treasury and customs officials, sailed to the galleon aboard a small launch. They questioned the master and reviewed the ship's register. The register contained a detailed listing of the type and quantities of the cargo the galleon carried, which would be sold later on at the Acapulco fair. This was basically part of the customs procedure which entailed a declaration of the goods carried by the ship. The master had to inform the officials if the vessel also carried precious metals such as gold and silver. The register indicated if the vessel had stopped in any ports before arriving in Acapulco. It was also necessary to declare how many slaves were on board the ship and how many were to be sold in Acapulco.

All galleons arriving in Spanish ports, whether in the Philippines or in Mexico, had to undergo the inspection process as stipulated by

government regulations in Spain. It was the duty of the ship's master to answer all of the questions posed to him by the officials of the port. As a result of his responsibilities as a master, he was often a highly experienced mariner and was familiar with the laws governing the operation of the galleons in the Philippines and in New Spain. He appeared confident of his actions aboard the ship and his handling of the cargo. The function of the ship's master, when it came to managing the operations of the galleon and paying customs duties on the cargo carried by the galleon, were basically the same in the Philippines, Mexico and in Spain.

The role of the master and the inspection process in Spain are described as follows: "On arriving at the port of destination the master was responsible for paying royal taxes on the cargo, which fees he collected, in turn, from the receivers of the merchandise. Having completed all of the official requirements, he turned over the cargo to its owners and collected the freight charges from them in cash, in kind or through letters of exchange. With the unloading finished, he began his efforts anew to find cargo for the return voyage, and a new cycle of responsibilities began that would not end until arriving in Seville. Once the inspections by the House of Trade had finished and the men had been paid their salaries, the only thing that remained was to present his accounts to the owners of the ship, who, if they were satisfied, signed a final receipt and paid the salary for his labors. A master needed patience in dealing with the bureaucracy and a liberal hand to bribe corrupt functionaries. He had to have many friends and hundreds of personal connections to load the cargo and choose the crew members. He had to be a hard bargainer to acquire good and cheap supplies. He had to have the gift of command and the organizational capacity to guide the ship. He had to possess a business sense to collect debts, pay taxes, and issue or accept letters of exchange. Above all, his great virtue was in knowing how to earn the confidence of others. "[169]

The master presented to the port officials any documents and communiqués from government functionaries in Manila, which were addressed to the king, the viceroy or other officials located in Mexico or in Spain. These often included documents related to royal orders and ordinances, as well as judicial matters. The sealed documents were forwarded to the appropriate officials. The master gave the port officials a list of the officers, crew members, soldiers and passengers on the vessel. The documentation indicated the number of infants born during the journey and those who died on the ship.

The processing of the *Nuestra Senora del Rosario*, when she arrived in Acapulco, serves as an example of how the procedures were carried out by the officials at the port. The galleon embarked from Cavite on

June 25, 1703 and arrived in Acapulco on January 15, 1704. This was the same vessel which was attacked by William Dampier's vessels. The master of the *Nuestra Senora del Rosario* was Juan Bautista de Zavala, who was responsible for answering all of the questions posed to him by the officials at the port.

When the galleon anchored in the harbor, the inspectors boarded the ship. The master informed them that the galleon had not stopped in any other ports prior to arriving in Acapulco, and that it sailed on its own without any accompanying vessels. He also stated that the ship's register included a list of the sailors and soldiers on the vessel and that it also indicated that one person, Santiago Perez de los Santos, died during the voyage. Moreover, two other crew members assumed the jobs of sailors who became sick during the journey. Documents from the government in Manila, for the king and viceroy, had been forwarded to them on arriving in Acapulco. When questioned by the officials as to whether or not he carried any precious metals on the ship, he stated in the negative. He claimed that he was only carrying whatever was listed in the register. If it had been discovered that he was indeed carrying unregistered gold and silver, he would have been accused of transporting contraband items which would have been confiscated. He also would have faced criminal charges and punishment by the Royal Treasury in Mexico City.

When questioned as to whether or not there were slaves on the ship, Zavala said that the Captain General Teodoro de San Lucas had two slaves - a married couple named Amaro and Carolo, and that they were his own personal servants. They were expected to return to Manila with him at a later date. Another individual on the galleon, who was also a captain by profession, but was serving as the boatswain for the ship, was in possession of a slave by the name of Francisco. The boatswain indicated that Francisco was his personal servant and that he was expected to return to Manila with him.

After questioning the master regarding the details contained in the register, they requested the keys to the hold and began an inspection of the cargo. A lieutenant named Gallardo turned over the keys to the hold and served as a witness of the inspection process by the officials. The captain general of the ship wrote of the inspection saying, "When the galleon arrived on Tuesday, the 15th of the current month (January), the Royal Officials of this port came on board and accompanied by the royal guards, opened the hatch and retained said keys. "[170]

While the officials carried out their inspection, they searched for any undocumented cargo which could later be sold at the trade fair without having paid the customary customs duties. The activities of smugglers led to a loss of funds which the government depended upon

to maintain their settlements in the Americas. As the collected customs duties, in turn, were used by the treasury in Mexico City to form the yearly subsidy for the maintenance of the Spanish government in Manila, they were concerned with the loss of any revenues. But despite their efforts to control smuggling activities, there were customs officials who were not hesitant when it came to accepting a gift, in order to overlook any excess cargo they discovered on a galleon. As far as they were concerned, they accepted bribes in order to increase their earnings even though they realized that they were breaking the law.

Once the inspection procedures had been finalized, the passengers were allowed to disembark from the galleon. Those individuals, who were able, went to the church and offered prayers of thankfulness for having survived the journey. The passengers who were ill were taken to the hospital. Their luggage and other personal belongings were also taken to the shore. After all of the passengers had safely disembarked from the ship, the crew members began unloading the cargo onto small boats. They transferred the cargo to royal warehouses along the seafront, where inspectors re-checked the cargo against the ship's register. Every bundle and bale had to be fully registered and marked on the document as having been received.

As part of the inspection process, guards were assigned to watch over the ship until it returned to Manila. If any cargo was removed from hiding places, by individuals on the ship after the registered cargo was transferred to the warehouses, they reported this to the customs officials.

After all the cargo was removed from the ship, the treasury and customs officials returned to the empty ship to conduct a second inspection. They inspected the vessel, from top to bottom, searching for any smuggled goods that had been hidden away on the ship. It was not unusual to find that some officers and crew members had actually hidden merchandise in some of the dark and inaccessible recesses of the vessel, so that they could sell the items later on in Acapulco. After the second inspection was completed, the ship was turned over to the shipwrights and master carpenters at the Acapulco shipyard. There, the galleon was careened and repaired for its return voyage to Manila.

The inspection process of the *Nuestra Senora del Rosario* was recorded on January 23, 1704 by Captain Juan Joseph de Vetia, Senior Accountant for the Tribunals of the Royal Treasury for the viceroy of New Spain. On January 24, 1704, a government notary in Acapulco, Antonio Jimenez de Guzman, along with Captain General Teodoro de San Lucas and the ship's master Juan Bautista de Zavala each attested to the fact that the inspection had been satisfactorily carried out by the officials in Acapulco.

The Acapulco Fair and the Mule Trains to Mexico City and Veracruz

When a galleon arrived in the port, Acapulco was immediately transformed into an international center of trade. Messengers traveled from Acapulco to the viceroy in Mexico City, and to other towns, to inform government officials of the galleon's arrival. The news spread throughout Central and South America and especially to the thriving city of Lima, Peru where the galleon's merchandise was hugely popular and sought after by customers there. As a result, vessels began arriving from these areas at the port in order to participate at the town's trade fair which was also known as the "Feria Annual de los Naos en Acapulco" or the "Annual Fair of the Galleons in Acapulco."

Meanwhile in Mexico City, merchants were busily organizing mule trains which set out from the capital to Acapulco. The mules were packed with goods they planned to sell at the fair. The merchandise was purchased by the many buyers who congregated in the port and who planned on re-selling the merchandise in their hometowns. The trade goods were also purchased by the same merchants who bought merchandise for the returning galleon to Manila.

The unpaved mule train road from Mexico City to Acapulco meandered through rough terrain that was difficult to traverse. The 286 mile road was known as the "Camino de China" or the "China Road." Additional goods were collected in Mexico City for transference to Veracruz along another mule train road known as the "Camino de los Virreyes" or the "Road of the Viceroys." The goods which were sent to Veracruz were loaded onto awaiting galleons of the Atlantic fleet or on inter-island sea vessels sailing to ports in the Caribbean. The fleet vessels sailed to Havana and then on to Spain with the merchandise brought to Mexico on the Manila galleon.

The fair was most probably held in the town's main square which was converted into a large outdoor marketplace. As in the case in Panama's trade fairs and in Veracruz, sails from the galleon were used to form tents. The merchandise was placed on mats on the ground or on tables to showcase the goods for sale. "The Manila galleon supplied New Spain's markets and fairs with exquisite porcelain dishes, lacquer work screens, rugs, fans, silk bedspreads, lacquered trays, silk cushions from Peking, boxes of mahogany or Philippine mahogany, silk carpets, canopies for beds, garnet jewelry, ceramic bowls, and wooden chairs, all from China. There were also chests inlaid with mother of pearl, writing cases, and ebony and ivory desks from Japan; Oriental ivory carvings used in worship; jewelry for personal adornment; oceans of expensive silk and wallpapers for the main rooms in the house." [171]

The fair normally began almost as soon as the goods were unloaded

from the galleon and placed in the government warehouses. It commenced around the middle of January and lasted until the end of February. At the fair, it was a time for buyers and sellers to gather and sell merchandise to each other, but it was also an opportunity to meet up with old friends and acquaintances and share news.

People from all walks of life gathered in Acapulco to buy and sell goods or just to be a part of the throng and the excitement of witnessing the arriving galleon. These individuals included traders from the capital and other parts of the Spanish colonies, as well as soldiers, government officials, priests, missionaries, entertainers, beggars, peddlers, muleteers, porters, and mariners who worked on the sea vessels in the port. The multitude of people in the town for the fair consisted of Spaniards, Mexicans, Native Indians, Peruvians, Chinese, Filipinos, Arabs and Portuguese, and most probably some other Europeans.

There were inns and drinking houses where crews from the various ships in the port met and whiled away the nights drinking, gambling and carousing. When Gemelli Careri was in Acapulco, he wrote of his impressions of the town during the fair saying, “Most of the officers and merchants that came aboard the Peruvian ships went to lie ashore, bringing with them two million pieces of eight to lay out in commodities from China, so that Friday 25 Acapulco was converted from a rustic village into a populous city and the huts before inhabited by natives were all filled with gay Spaniards to which was added on Saturday 26 a great concourse of merchants from Mexico, with an abundance of pieces of eight and commodities of the country and of Europe. Sunday 27 an abundance of commodities and provisions continued to arrive for so great a multitude of strangers. ”[172]

As Spaniards from Peru turned up at the fair every year, it was interesting to note that as early as 1580 there were discussions on whether or not to have a direct galleon route from Manila to Callao, Lima’s port city. As Lima was such an avid market for Oriental products, the notion of having a direct route between Peru and the Philippines was debated in Manila by government officials. Ultimately, the plan was never carried out as members of the clergy in Mexico City objected to the proposal for reasons that remain unclear.

A year earlier in 1579, Philip II announced that Acapulco was the only port in the western side of Mexico which was allowed to handle commercial activities between New Spain and the Philippines. Vessels from Central and South America were permitted by the government to sail to Acapulco to attend the trade fair. In any case, the Peruvians began sending their own vessels to Acapulco to participate in the Acapulco fair. Then in 1636, a royal decree from Philip IV, prohibited the sale of Chinese goods between New Spain (Mexico) and Peru, but

this did not prevent the Peruvians from turning up at the Acapulco fair to purchase a share of the galleon's cargo. The ban was lifted in 1779.

The process of buying and selling the galleon's cargo at the fair was supervised by two government officials who were sent to the port by the viceroy in Mexico City. In discussions between the two officials and the merchants and intermediaries from Manila, they decided on the categories under which the merchandise was to be sold, and the establishment of the prices for the goods. By determining the prices in advance, this precluded the need for any additional bargaining between the sellers and buyers. However, it appears that unabated bargaining continued throughout the fair.

The merchants from Mexico City also colluded amongst themselves to control the prices of the goods they were interested in purchasing. The Manila merchants were, at times, compelled to sell the goods for the prices offered by the buyers from Mexico City or from Peru. Additionally, the Peruvian buyers made it known that they had more than enough silver dollars to buy the goods immediately which helped the Manila merchants. They knew that the Mexican buyers used delaying tactics in order to force the Manila sellers to sell at lower prices. They realized that the Manila merchants were anxious to return to the Philippines on the returning galleon, which was scheduled to embark from Acapulco in March. Given the circumstances, they had to settle all their negotiations by the end of February and return to Manila with the profits. As a result, they often settled on prices for the goods which were undercut by the buyers. Nevertheless, it was apparent that they made profits of more than 150 to 200 percent on the merchandise they sold in Acapulco.

The Spanish bureaucracy governing the colonies was so complex and convoluted, that even the transactions at the Acapulco fair were meticulously recorded by government officials. There was a special department in Mexico City, which was in charge of monitoring the fair. The department was known as the Bureau of Accounts. This agency issued a certificate of sale to the buyer upon purchasing goods at the fair. Based upon the receipt of the certificate, the buyer was then issued a license to transfer the goods to his home town. Apparently, the issuance of the certificates provided a method by which the Royal Treasury in Mexico City was able to compute how much silver was turned over to the sellers at Acapulco. They were concerned about the amount of silver which was transferred from Mexico to investors in Manila and in China, and for this reason they kept records of the transactions. However, the government was also interested in knowing how much silver originated from the various settlements in the Americas. All buyers who arrived in Acapulco, to

purchase goods, paid for them in silver. They had to show that they were in possession of a license from the government which permitted them to pay in silver for the goods. The buyer's hometown and the amount of silver the merchant carried to Acapulco all had to be recorded by local officials in his place of residence.

The sellers in Acapulco, who were acting on behalf of the owners of the merchandise in Manila and in China, sold the goods at cheaper prices if compared to the locally produced items or those imported from Spain. Their primary concern was to sell all the goods and return to Manila with the profits on the returning galleon as quickly as possible. The buyers, on the other hand, were not in as great a rush as the sellers. When the buyers returned to their hometowns, they were able to sell the galleon merchandise for exorbitant profits.

The businessmen in Mexico and in Manila came up with a variety of clever schemes in order to maximize their sales in the Americas. For example, a large consignment of Chinese textiles was sent to a merchant in Mexico, but the items were not immediately sold. Instead, the Mexican merchant stored the textiles until all the fabrics at the Acapulco fair had been sold and then he sold his fabrics for huge prices. In this way, both the investor in Manila and the merchant in Mexico derived a large profit. The usual return profit to the investors in the Philippines and China was approximately two million pesos, but the amount could be even higher given the fact that it was normal, if not legal, to ship contraband or smuggled goods on the ships. In any case, the profits were so high that the Mexican government was able to return the collected customs duties to Manila as the so called "Royal Subsidy" for the maintenance of the colonial government in the Philippines. As a result, the profits ranged from possibly two to three million pesos per ship. Given the fact that until the end of the sixteenth century as many as four galleons sailed from Manila to Acapulco each year, each vessel's cargo was probably sold for at least two million or more pesos. The profits of the galleon trade were obviously astonishing.

Another method used by Mexican and Peruvian merchants in Mexico to increase their profits was to purchase the Oriental goods they wanted in Manila rather than at the Acapulco fair. In this way they eliminated the need to use a Spanish middleman in Manila as their agent and who purchased goods for them in the Philippines. Apparently, as early as 1586 this business arrangement was already in use.

The mayor of Acapulco set the date when the fair was to end. At that time, the buyers began transporting their merchandise to their hometowns. The merchandise which arrived in Mexico City was transferred to the capital's main marketplace the "Parian." It was no

coincidence that the marketplaces in both Mexico City and in Manila were known by that name as they were both involved in the transaction of Oriental goods. The name “Parian,” was derived from the Chinese word “palien” which meant “organization.” Thus, the shops of Mexico City’s Parian served as an organized collection of businesses involved in the selling of goods which arrived on the galleons. Given the fact that the Parian marketplace was of prime importance to the inhabitants of Mexico City, it was not surprising to find that it was prominently located at the city’s central square.

The Filipino historian Gregorio Zaide provided an interesting description of the sixteenth century marketplace saying that, “The Mexican Parian was constructed at a site in Plaza Mayor which was owned by the Ayuntamiento (government) of Mexico City, for it had been given long ago to the Ayuntamiento by Charles I in his Royal Decree of December 13, 1527. This Parian was a massive edifice of numerous stores and soon became the premier shopping center of Mexico City. It prospered because of the florescence of the Acapulco-Manila trade. It was opened daily from early morning to late evening, except Sundays and religious holidays. Thousands of people – rich and poor, nobles and commoners, Indios and Spaniards, and nuns, caballeros and senoritas – all were fascinated and titillated by the magnificent exhibits of the goods from the Asian world, such as the perfumes and lotions from Arabia – rugs and tapestries from Persia – ivory articles from Siam – sandalwood from Borneo – spices from the Moluccas – silk textiles, parasols, ceramics and camphor chests from China – painted bamboo screens, colored paper lanterns, and fanciful fans from Japan – embroideries and mantones (shawls) de Manila, Bicol sinamay and abaca ropes, Ilocos cotton blankets, Cebu lampotes, Laguna wood carvings and Iloilo jusi (fibers). In due time the fame of the Mexican Parian spread far and wide throughout the country. Many affluent families from Cuernavaca, Taxco, Puebla, Guadalajara, Guanajuato, San Luis de Potosi, Veracruz and other cities visited Mexico City to shop at the Parian.” [173]

In addition to the mule trains which traveled along the Camino de China, there were also passengers, officers, government functionaries, priests, missionaries, sailors and soldiers who all had to traverse the rough terrain to Mexico City. Some rode on especially hired mules or in coaches and others had no choice but to walk to the capital. As the road was unpaved, it proved difficult for all of the travelers. In the seventeenth century, there were small inns, known as “posadas,” located along the road where travelers could spend the night or have a meal, but in most cases the inns were very primitive and run by local Indians. The travelers often had to sleep on the ground and were under siege by a multitude of insects they found in these

accommodations. If these same individuals were on their way to Spain, they were able to rest in Mexico City before setting out on a similar road to Veracruz which offered just as few amenities. When they arrived in Veracruz, they boarded one of the galleons of the Atlantic fleet and sailed to Havana and then to Cadiz, Spain.

While Gemelli Careri traveled along the Camino de China to Mexico City, he wrote of spending a night in one of the posada inns. He said that the rustic inn consisted of five small huts with thatched roofing. In addition to the annoyances he found there, he appeared irritated with a fellow traveler from Peru who tried to sell him some merchandise. He said that on, "Tuesday 5th I was much annoyed with the heat and gnats, but much more on Wednesday 6th, by the babbling of a merchant from Peru, for him, according to custom of that nation, endeavoring to talk me into a bargain, gave me a violent headache and yet we concluded upon nothing. The Spaniards of New Spain are of another temper, for they deal generously and genteelly as becomes them."[174]

A certain percentage of the galleon's cargo was purchased by merchants in Mexico City for European markets, as well as for markets in the Caribbean and along South America's northern coast such as Columbia, Venezuela and Panama. As a result, the merchandise was first transferred to Mexico City and then to Veracruz where it was loaded on to vessels anchored at the port. The exports included Oriental goods such as Chinese porcelains, silk and textiles, religious images and gold crosses studded with gems, spices from the Moluccas and trinkets. Moreover, products and commodities produced in Mexico were also included in the shipments to Spain. These consisted of precious metals and jewelry or silver items worked by artisans in the country, as well as everything from drinking cups to large serving platters, cochineal red dye, indigo, root vegetables (potatoes/ squashes), tomatoes, corn, annatto dye seeds, sugar, woods, animal hides, tobacco, vanilla beans and cocoa.

Asian Influence in the Arts of New Spain

The ships of the Manila-Acapulco trade route established a continuous link between the Americas and Asia. In addition to the vast quantities of merchandise which were carried by the vessels, the trade run also established a communications link with the viceroyalty in Mexico City, the king in Spain and the Spaniards who populated the Philippine archipelago. Moreover, the galleon trade led to an ongoing exchange of ideas, culture and religious beliefs and the transportation of people from the Americas and Spain who were to shape Manila, and for that matter, the entire Philippines as Spanish influence spread across the archipelago. Many of the Spanish influences in the Philippines, by virtue of the conquest of the country which was

orchestrated by Miguel Lopez de Legazpi in 1565, have already been discussed in previous chapters, but the trade between the two countries also influenced Mexico in a variety of ways.

It cannot be denied that the goods brought to Mexico on the galleons were hugely popular in Mexico. The enormous profits returned to the investors in Manila and in China attests to the fact that the merchandise from the Orient was sought after by consumers throughout the Spanish colonies. When the galleon arrived in Acapulco, it caused wild excitement in the towns and cities of the colonies and no doubt consumers eagerly looked forward to purchasing an Oriental item of their own.

The Chinese artisans in Manila and in China were adept at copying Western style arts and crafts. If presented with a European painting, sculpture or an illustration, they were able to reproduce hundreds of similar products. Nevertheless, the Asian imports were considered unique, beautiful, intriguing, plentiful and most of all, cheaply sold to customers in the Americas. As a result of the multitude of goods which flooded the marketplace of the Parian in Mexico City, not all individuals could afford to purchase them especially as they were considered luxury items. However, individuals of all classes also wanted to own Asian products and this led to the production of knock-offs that were mass produced in Mexico and resembled the original items sought after by less affluent customers.

"For over two centuries, the nao de China (the China ship) voyaged to New Spain loaded with spices, perfumes, culinary and medicinal plants, silk, pearls, precious gems, silverware, porcelain, and ivory. Many of these articles had a strong influence on local arts and crafts. Chinese lacquers were imitated in Michoacan, and chests of drawers, trunks, and Japanese folding screens served as models for native artisans. The ornamentation of urns and chinaware was produced on Talavera ceramics in Puebla, and beginning in the seventeenth century, Chinese fireworks added color and life to town fairs. The Oriental presence is also evident in Mexican words such as 'paliacate,' popular characters such as the 'China poblana,' entertainment events such as cockfights, and porcelain coins called 'chinitas.' The galleons from Manila also brought slaves from China, Malaysia, India and Japan, all of whom arrived with their own set of practices, beliefs, and traditions. "[175]

The designs and motifs found on the Oriental goods brought to the Americas meant nothing to the Spaniards who just viewed the merchandise as decorative or utilitarian items for the home. They were not aware that on the porcelain item, whether it was a plate or teacup, the Chinese artisans painted the symbols of longevity upon them. These consisted of mountains, pine trees, peaches, turtles, deer

and a certain type of wild mushroom which offered one long life. Over and over again, one could see these same symbols repeatedly depicted on numerous pieces of export ware from China. However, as the Spaniards were unfamiliar with Chinese culture, history or mythology, they remained ignorant of the fact that the pictorial depictions on the items they purchased were filled with the stories of Chinese mythology and folklore. The thousands of Chinese jars used by the Spaniards to transport water on the galleons were decorated with dragons. The dragon in Chinese mythology symbolized the power of transformation, as well of rain and storms. For this reason, it was often depicted surrounded by clouds. At other times, the dragon carried in its mouth the pearl of wisdom.

Another motif used by the Chinese on porcelain and other ceramics, pottery and furnishings, was the depiction of pairs of animals. These consisted of for example, two turtles or two deer and various types of birds. The animals symbolized compatibility, devotion to each other and domesticity. The phoenix symbolized harmony in the world and was often depicted with the dragon. Another popular motif was the twelve animals of the zodiac. The Chinese also decorated their porcelains and other exports with flowers and plants such as the bamboo, which was honored by the Orientals for its strength, durability and resilience. The peony symbolized good fortune and the chrysanthemum signified longevity. Each flower had its own designated meaning, but this would have been lost on the Spaniards who used these items on a daily basis. In any case, the objects with their Oriental design motifs did not hinder their circulation in the Americas, and astonishingly, the church did not object to the merchandise which depicted alien concepts they were unfamiliar with, even though, under other circumstances they might have considered the motifs as pagan.

Even though, the Chinese craftsmen in China and in Manila attempted to create exports that pleased the tastes of their American and European customers, the end products always had a decidedly Oriental look about them. For example, it was not unusual to find that sculptures, in ivory and in wood of Christian saints, had Oriental features even though they were arrayed in western style robes and were furnished with attributes associated with them.

The galleon trade also led to an increase of manufacturing industries in Mexico, which were industriously producing similar products to those available in the Parian, and originally from China, Japan and from other Asian countries, but with a decidedly Mexican flavor. “Artisans in viceregal Mexico produced massive quantities of pieces worked in precious metals; lacquered trays; feather work portrayals of holy images; chessboards inlaid with mother-of-pearl and

then painted; fine marquetry boxes; burnished pottery from Tonala; tortoiseshell boxes from Campeche and Guadalajara; lacquer work furniture from Olinala; enamelware from Puebla; rebozos (shawls) from Sultepec; huipiles (blouses) from the Puebla and Oaxaca highlands; copper kettles and cauldrons from Santa Clara del Cobre; tecali-stone furniture, as well as furnishings from Huauhchinango and Xochimilco; Christ figures from Michoacan made of corn cane paste; textiles from Tabi, San Miguel del Grande and Xilotepec, to name a few. In colonial times, it was common practice for entire villages to be devoted to producing a single craft, shipping the wares for sale in the capital. "[176]

From an artistic perspective, it can be seen that the introduction of Asian goods into the Americas and particularly into Mexico, had an interesting effect on the decorative arts of the country. For example, Mexicans ingeniously used bits of Chinese porcelain to decorate their water fountains, monuments and homes. They took the broken pieces of colorful porcelain and pressed them into the wet cement creating decorative monuments known as "Riscos." The pieces of pottery consisted of shards of Chinese plates, small dishes, teacups and ginger jars. The decorative monuments can still be seen in Mexico.

In another example, Mexicans created reproductions of Japanese lacquered furnishings which are known as "Namban Arts." Many of the reproductions such as lacquered wood with mother-of-pearl inlays combined uniquely Japanese production techniques, but showed scenes of life in Mexico City. In Japan, during the galleon trade run era, the Japanese artisans referred to the pieces as "Namban-Jin." Interestingly, the term was coined by the Japanese and meant "Southern Barbarians." This was in reference to the Portuguese traders they encountered in their homeland, and who went there on trade and missionary missions during the sixteenth and seventeenth centuries. The Portuguese traders traveled to Japan from their trade posts in Malacca and in Macau. At that time, the Japanese produced lacquered furnishings for the Portuguese trade market, which was also part of the cargo carried by the Manila galleons and taken to Acapulco for sale there and in Europe. In a similar fashion to the Chinese who tried to produce merchandise with their interpretation of European motifs, the Japanese artisans also produced their version of European arts, which came to be known as Namban-jin.

The scenes they depicted in the Namban-jin, often referred to Portuguese themes such as historical topics. Hence, the term of Namban-jin referred to the exports which were essentially produced for European buyers. As these pieces entered Mexico, they became very popular and sought after by wealthier individuals. Realizing that there was a demand for the furnishings, Mexican manufacturers began

producing reproductions of the pieces. The end products combined Japanese lacquer ware with Portuguese and Mexican motifs.

Mexican clothing was also influenced by the products of the Orient. The prosperous members of society could afford the luxury goods brought to Mexico on the galleon. They were particularly fond of the fabrics from China. Customers in Mexico and in the other settlements in the Americas eagerly bought the textiles which had become fashionable in the colonies. Women clamored to have the latest styles and gowns made of luxurious fabrics and in particularly those made of silk. “No woman of the Mexican aristocracy would ever be seen in public without her fine silks embroidered in gold and silver, garnished with several lengths of Flemish lace and lavishly adorned with pearls and diamonds – indeed, the resulting weight was such that she required a sedan chair (from China) to carry her as far as the luxurious carriage waiting to take her to her destination. ”[177]

They decorated their gowns with layers of silk fabrics and then wore decorative jewelry, produced in the Orient and consisting of earrings, several gold chains and at least one crucifix, as well as many gold and gem studded rings. Many fabrics were ornamented by the Chinese with colorful embroideries of flowers and other motifs. Mexican manufacturers copied these Oriental designs for the traditional costumes of the country, even though they did not understand the symbolism behind the various motifs used by the Chinese.

It is interesting to note that there was a silk manufacturing industry in Spain during the same time period of the Manila-Acapulco galleon trade run. In fact, the Spaniards had monopolized the industry. Not only did the peninsula Spaniards provide the colonies with fabrics, they also shipped all the goods required by the Spaniards in the New World for their day-to-day lives. When the Spaniards and Chinese in Manila and in China began sending silks to Mexico on the galleons, the fabrics were quickly sold out as they were well made and cheaply sold. The influx of the lower priced Chinese silks led to confrontations between the Spanish manufacturers and the exporters of the Chinese silk to Mexico, as they began to see a decrease in their profits. This led to a reduction in how many galleons were allowed to travel to Acapulco on a yearly basis, from almost four a year to just one ship. Nevertheless, the products of the East continued to be popular items in Mexico, and the ships were often overloaded with goods to make up for the loss in profits. This also led to the clandestine smuggling of goods to Mexico. In conjunction with these activities, Mexican silk producers were already actively involved in the production of this much sought after fabric.

The fact that there were so many individuals in Mexico, who could

afford the luxury goods brought to the country on the galleons, clearly indicated that a segment of the population was affluent. “In any upper class household, it was common to see a tasteful blend of Mexican, Oriental, and European furnishings. If anything characterized interior design in New Spain, it was the hodgepodge of cultures represented, with imported goods from the Maghreb, Barbary, Lombardy, China, Venice, the Philippines, India, Genoa, England, Flanders, Japan, Brittany, Germany, Andalusia, Galicia, France, alongside items manufactured by indigenous groups within the territory. For the affluent classes, prestige was often measured in terms of the acquisition of such goods – the more the better. ”[178]

Mexico grew rich over the years of Spanish colonial rule and this led to a society that demanded an ever increasing number of goods from the Orient. These same individuals were able to pay for the goods in silver reales which, in turn, were highly sought after by merchants in Manila and in China.

Chapter 15

The Return Journey (Tornaviaje) from Acapulco to Manila

After the galleon's cargo was removed from the ship and the passengers were transferred to the shore, the vessel was turned over to the shipwrights. At the Acapulco shipyard the vessel was careened and repaired for its return journey to Manila. "Once the merchandise was on terra firma, and all fiscal matters had been dealt with, repairs were undertaken on the galleon to prepare it once again for the return voyage. The cargo did not present any problems in this direction as there was less volume and so the tremendous problem of space did not arise. Indeed on occasions, the galleon had to take on ballast for this return trip. "[179]

There was every indication that the Acapulco shipyard was tiny, if compared to the larger and more extensively sophisticated shipyards of Cavite, Guayaquil, Cartagena and Havana. Each one of these shipyards was involved in the construction of ocean going vessels. However, the vessels used in the Manila-Acapulco galleon trade run were mainly constructed in the Philippines and particularly at Cavite. There is no evidence indicating that Acapulco was consistently involved in the construction of comparable vessels. But the shipwrights at the facility were occupied in the construction of smaller vessels for use along the coasts of Mexico, Central and South America on trade missions or for other purposes.

The fact that the galleons were not constructed in Acapulco, may have been due to the lack of the raw materials required to construct the vessels such as the tropical hardwoods, which were more plentiful in the Philippines than in Mexico. Moreover, in Manila, it was easier to find laborers than in Mexico. Many Filipinos were arbitrarily recruited to work at the shipyard, constructing the vessels and to work as crew members on the galleons. In the small town of Acapulco, it was necessary to go further afield to find men for the vessels. In many cases, they were pressed into service in towns and villages of the surrounding areas of Acapulco and in Mexico City.

Shipyards in Other West Coast Ports (Guayaquil, Ecuador and in Callao, Peru)

In addition to the ports and ship building facilities found in Mexico, the Spaniards established several other shipyards in South America, where they constructed sea vessels. Most of the vessels they constructed in these facilities consisted of galleons and smaller vessels for use along the Pacific coasts of the Americas. The main shipyards

consisted of Guayaquil, Ecuador and Callao, Peru. This particular port catered to the needs of Lima. In the case of Guayaquil, it serviced the requirements of the capital of Ecuador, Quito, as well as furnishing vessels to Lima for the silver cargoes that were brought to Panama City for trans-shipment on the Caribbean galleons to Spain. The port city was also well known as a producer of weaponry. The main factory in the town producing fire arms was based in the area of Latacunga. In the shipyard, there were a number of warehouses for the storage of provisions, supplies and equipment used within the facility, as well as on the vessels constructed there. Warehouses also stored cargo awaiting shipment.

The port of Guayaquil was located up river from the Pacific on the Guayas River. The small town the Spaniards discovered there in the sixteenth century was already inhabited by local native Indians. When it was conquered by the Spaniard, Francisco de Orellana on July 25, 1538, on behalf of the Spanish Crown, it was initially called “Santiago de Guayaquil.” As a conquistador, Orellana was born in Trujillo, Spain in 1511, and was the first Spaniard to explore and navigate the Amazon River. When he arrived in the Americas in 1527, he was only sixteen years old and in 1533, he joined Francisco Pizarro’s work in Peru. He continued to participate in numerous expeditions in South America, and eventually died at the age of thirty-five in November 1546, during an exploratory expedition of the Amazon River.

The capital of Ecuador, Quito, was known by the name of “San Francisco de Quito,” when it was founded by the conquistador Diego de Almagro in 1534. As a Spaniard, born in the town of Almagro, Spain in 1475, he was already considered an elderly man when he seized the territory away from its native inhabitants. At the time, he was fifty-nine years old, and portraits of him, depicted a man with a partially balding head and white hair. As the majority of the men who participated in the expeditions to the New World were young, healthy men, it was an interesting departure to find someone who was considered much older than the other members of the missions. The expeditions usually consisted of military confrontations with the natives, so the men on these missions had to be fit in order to survive the dangerous situations they encountered. In any case, Diego de Almagro proved he was in good physical condition, as he was able to withstand the demands of the exploratory missions he was involved in, which included a trek along the Inca Trail and crossing the Andes into Chile. At one point, in his conflicts with the natives, he lost an eye, but the injury did not prevent him from joining other expeditions led by the Pizarro brothers when they conquered Peru. Four years after his participation in the conquest of Ecuador, he returned to Peru and died in Cuzco on July 8, 1538 at the age of sixty-three.

Of the two seaports, Guayaquil was of greater importance to the Spaniards, as it served as a major hub for cargo entering South America, as well as a shipyard involved in the construction of sea vessels including galleons for Ecuador, but particularly for the Peruvians. In fact, one could say that the port of Guayaquil was Spain's most strategically important seaport on the Pacific coast of the Americas.

Even though the Spaniards were aware of the possibility of enemy encroachments, Guayaquil was not provided with a defensive fortress or any other type of military fortification to protect the town and the shipyard. As a result, it became an easy target for pirates. Its first military confrontation with enemy vessels occurred in 1624 when it was attacked by a small Dutch fleet of vessels. The fleet was under the command of Captain Schulte. Two hundred Dutchmen landed and captured a small island near Guayaquil. Moreover, they burned several boats off the small island of Puna. During the conflict that ensued between the Spaniards and the Dutch invaders, the Spaniards lost one hundred men. As the Dutch had no plans to retain Guayaquil, they sailed away from the port, but before leaving, they set fire to a number of warehouses. One of the warehouses was filled with fabrics which were valued at 100,000 pesos. Once out at sea, the Dutch disposed of the seventeen Spaniards they had captured by throwing them overboard.

When the Dutch retreated from Guayaquil, the Spaniards began discussing the need to fortify the port against future enemy attacks. A report was sent to Philip IV on April 15, 1630, by the Viceroy of Peru, Luis Jeronimo de Cabrera, Fourth Count of Chinchon (1629-1639), in which he appealed to the king for assistance to defend the port city. As Ecuador was under his jurisdiction, he pointed out that Guayaquil was strategically located and was South America's main shipyard. He stated that the majority of the galleons used by the Peruvians were constructed at Guayaquil. As such, Guayaquil was the entranceway for much of the cargo that arrived in South America for both Ecuador and Peru, and that it was vulnerable to attacks by enemy vessels and could possibly fall into the hands of the Dutch. He was afraid that the Dutch might someday rule much of northern South America and put an end to their control of the territories. Under those circumstances, they would have obviously been a threat to the annual transference of the silver from Peru to Panama.

But Viceroy Cabrera was not sincerely interested in actually constructing a permanent fortification in Guayaquil. "The viceroy opposed permanent fortifications at Guayaquil. They would be costly, and they were unnecessary. He estimated that the original cost to the treasury would be 65,000 pesos, not to mention subsequent expenses

for maintenance of these installations. The initial cost of fortifying Acapulco, for example was expensive for the time period and amounted to approximately 142,000 pesos in the sixteenth century. According to the viceroy, the fact that the Spaniards were able to defend themselves against the Dutch invaders in 1624, demonstrated that the port could be defended without fortifications. Moreover, there were between one hundred and one hundred and fifty freeholders in the city who could immediately mobilize a militia of three hundred and fifty men. Within twelve days, reinforcements of men and munitions from the Sierra towns of Cuenca, Riobamba, and Chimbo could reach the port. Further help could come from Quito within a few weeks."[180]

As a result of the indecision to construct a permanent fortification at Guayaquil, the port remained vulnerable. In 1687, it was attacked once again, but this time by French and English pirates. They were operating under the command of an Englishman, George d'Hout and two Frenchmen, Pierre le Picard and Francois Grogniet. A battle erupted between the Spaniards and the two hundred and sixty pirates. At the end of the conflict, thirty-five pirates died while forty-six were wounded. The Spaniards lost seventy-five men and another one hundred were injured. The pirates demanded a ransom to end the confrontation, which was paid by the Quito government in return for the release of the prisoners they held, and an assurance that the port would not be burned to the ground. The pirates complied with the government's demands and sailed away from Guayaquil.

In 1709, Guayaquil was confronted by another group of pirates: Woodes Rogers, Etienne Courtney and William Dampier. They arrived at the port with one hundred and ten men and proceeded to attack and loot the city. They also demanded a ransom, which was not paid by the Quito government, as the pirates fled from Guayaquil, when they learned that an epidemic of yellow fever had broken out.

The other port of great importance to the Spaniards during the colonial period was Callao, located on Peru's Pacific coast. Although it was considered Peru's main seaport, with a shipyard of its own, the primary site for the construction of its sea vessels continued to be Guayaquil. Nevertheless, while the Peruvian government purchased galleons from Guayaquil, the port of Callao was extremely important to them as they shipped huge quantities of silver, gold and gems, which were mined in Peru and in Potosi (now part of Bolivia) to Panama. The precious items were transferred across the Isthmus to awaiting galleons on the Caribbean side of Panama. Goods to and from Argentina were also brought to Callao, on the backs of mules and over the Andes, for re-shipment to Panama and Havana, as well as to Acapulco for sale there at the fair. It was also a port where cargo from

Acapulco arrived in Peru for customers located in Lima, as well as for other settlements in South America.

After Lima was settled by the Spaniards in 1535, they extended their control of the area to Callao which was founded in 1537. The port city itself is situated on a peninsula that juts out into the Pacific and was known as “La Punta.” As the Spaniards realized the importance of the port and especially the need to protect the silver shipments to Panama, they erected a fortification there. It is known as the “Castillo de Real Felipe,” and to the present day it is still standing majestically in Callao. It is a massive, irregularly shaped, walled fortress with four enormous bastions and openings for gun emplacements. The fortress is surrounded by an outer wall and has a main gate that leads into an enormous open aired space. At one time, in the past, this area was filled with government and military offices, as well as barracks for soldiers and warehouses for provisions, supplies and equipment. The fort was situated in a strategically located spot as it faced the Pacific on the two sides of the peninsula and could protect the port from both locations as well as from the land. When the fort was originally constructed it would have been situated closer to the sea, but today, after the passage of many centuries, the city of Callao has grown around it blocking it from direct access to the sea. Moreover, the original colonial town of Callao, in the sixteenth and seventeenth centuries, would have been constructed around the fortification. Today, however, there is little evidence of the structures that were originally there except for the fortification. Apparently, in 1746, an earthquake and a tsunami destroyed much of the port, although the fort, which was sturdily constructed, remained standing.

There were several other smaller ports which originally came under the jurisdiction of the Peruvian viceroyalty and these included the port of Arica, which is still located in northern Chile. It was originally founded by the Spaniard, Captain Lucas Martinez de Begazo in 1541. From 1545 onwards, it was instrumental in the loading of silver from the Potosi mines, onto galleons from Lima. Potosi was strategically vital to the Spaniards for its huge production of silver during the colonial period. As a result of its importance, the port of Arica was continuously beset by raiding pirates such as Francis Drake, Thomas Cavendish and the Dutchman, Joris van Speilbergen.

Another port of importance to the Spaniards was the town of Paita (also known as Payta), located north of Callao. For a time, from 1578 to 1588, the port was the Spanish capital for the northwestern area of Peru. As it was continuously under attack by pirates, the capital was moved to San Miguel de Piura in 1588, which was also located in northern Peru and closer to the border of Ecuador. The town was originally founded by the Spanish conquistador of Peru and the Incan

empire, Francisco Pizarro in 1532. Even though Piura retained its function as a port, to the Spaniards, it was not as essential as Callao and Arica.

Other than the ports located in Ecuador, Peru and Panama, the Spaniards also maintained a port on the west coast of Nicaragua. The port catered to the needs of Central America - receiving cargo from both Acapulco and Callao, as well as shipping any goods produced there. Nicaragua came under the jurisdiction of the viceroyalty of New Spain which included Mexico, Guatemala and Nicaragua. After the Mexican War of Independence in 1821, Nicaragua was granted independence and became a republic in 1838. Guatemala also gained its independence at the same time. It was divided into two regions: Guatemala, which included Honduras, El Salvador and Chiapas, and the other region which consisted of Nicaragua and Costa Rica. The territory of Chiapas in southern Mexico continued as part of that country.

Preparation of the Return Journey

As the returning galleon carried less cargo than the incoming galleon from Manila, it was basically a people carrier when it embarked from Acapulco. As such, it transported a large number of passengers who consisted of government officials and their families, priests, nuns, missionaries, merchants, military personnel, as well as anyone else who had a hankering to travel to the Far East for whatever purpose they had in mind. Some of the passengers were traveling to Guam, as the ship stopped there before going on to the Philippines, but the majority traveled to Manila.

A 1575 document from the Archives of the Indias in Seville provides an indication of the type of individuals who boarded the galleon in Acapulco. They traveled to Manila with Governor Francisco de Sande who was assuming his new post in the capital. Incidentally, he served as governor of the Philippines without accepting a salary. This obviously indicates that he may have been a member of Spain's aristocracy and wealthy in his own right. Reviewing the list, one cannot help but notice that the majority of the persons mentioned were teenagers or in their twenties. This was probably the case, as the journey was not for the faint hearted or infirm, but for the young and healthy given the arduous nature of the voyage. The following is the governor's list. [181]

"Bernardino de Sande, my brother, 16 to 17 years old. Don Luis de Sahajosa, a native of Caravaca, son of Captain Sahajosa and of a sister of Licenciado Alonso Muniz (rest in peace) 38 years old. He was a former soldier in Italy and in the galleys. He has been in the Indies for eight to nine years. He goes prepared and well equipped. He is dark, bearded and very tall."

“Don Sancho de Caballos, a native of Salamanca, 36 years old, of moderate height, slightly red-bearded, has been a soldier in Italy and must have been eight to ten years in New Spain. Speaks Greek and Latin; knows how to make navigation maps; is knowledgeable in the Science of Navigation, knows how to take latitudes and is a Theologian. The viceroy of Mexico had commissioned him to write the geography of New Spain with a good salary. He wrote the first part in over a year and he resigned to go with me.”

“Hernando Perez de Monroy, 25 years old, the eldest son of Rodrigo de Carvajal was the son of Hernando Perez de Monroy, the elder, son in law of the chamberlain who had a small farm in Cordovilla. He goes well prepared and well equipped. ”

“Don Matias de Landecho, the eldest son of Licenciado Landecho who was president of Guatemala. He is 22 years old. Well prepared and well equipped.”

“Don Cristobal de Carcamo, a legitimate son of Doctor Valdes de Carcamo, Magistrate of Mexico. He is 15 to 16 years old. He is the son of Dona Maria de Ocampo, who is the first cousin of Dona Geronima de Ocampo, the wife of Diego de Vargas Figueroa, a native of Caceres. According to Dona Geronima who had written me, he is well prepared and equipped.”

“Juan Manuel Pimentel and Pedro Manuel Pimentel, his brother, sons of Garcia Manuel Pimental and a local lady of this land (Mexico). This Garcia Manuel Pimentel is the father in law of Don Alonso de Sotomayor, the brother of Juan de Chaves from Truxillo. The elder one is 25 years old and the younger is 20 years old. They are well prepared and well equipped.”

“Agustin de Mercado Sotomayor, son of the Factor who is now in Mexico, was the page of the viceroy. He came here where his father sent him fine clothes and good weapons. He must be 18 years old.”

“Andres Maldonado, an old soldier of this land, a native of Salamanca. A well mannered man although of very dark complexion; he was the leader of the people of Chichimecas and has officially served again as alferez (lieutenant) in Mexico with merit but had to leave when he wounded an official in a fight. He goes well equipped and must be about 38 years old. “With him comes another soldier from this land named Pedro Garcia who was also with him in Chichimecas. They are of the same age and he comes well equipped. He is also a tough man.”

“Alonso de Vargas is 20 years old. According to his relatives, his father is a native of Caceres who came to the Indies with the Senor Chief Comendador of Alcantara Don Nicolas de Ovando when he came as governor. Although nobody can tell me of his origin or anything about him, it is publicly known here that he is a nobleman and he

comes well equipped and armed. ”

“Juan de Ledesma a native of Villalba del Alcor, the son of Lorenzo de Niebla who came over eight years ago. He must be 30 years old and comes well equipped and armed. ”

“Sebastian de Miranda is about 30 years old - a native of Ciudad Real was formerly a soldier in the Chichimecas. He comes ready and well equipped.”

“Juan de Oliva, a native of Almendralejo is about 30 years old, has been a former soldier in the Chichimecas, he comes ready and well armed.”

“Francisco Chacon, a native of Sevilla, is 20 years old, has been a soldier in the Philippines. He is ready and well equipped.”

“Juan de Chillas, a native of Sevilla, is 30 years old, the brother of the wife of Alonso Baco de Andrada who serves as majordomo of the Marques de Valle. He goes well equipped and ready.”

“Pedro Lucas, a native of Sevilla, is 25 years old. He comes well equipped and armed.”

“Pedro de Bibanco is 30 years old. He is well armed.”

“Miguel Geronimo de Bastidas is 25 years old, the son of Ynigo de Avendano, a Biscayan and two other companions namely Juanes de Ribas, a native of San Sebastian and Nicolas de Mirano, the son of Ynigo de Mirano a native of San Sebastian.” Another passenger was an elderly Spanish man and his son who both sailed with licenses from Mexico to do so.

Under normal circumstances, the crew that arrived on the galleon from Manila usually remained with the vessel for its return journey to the Philippines. They were only paid a part of their salaries in Manila as an incentive for them to remain with the vessel. When they returned to the Philippines, they received the rest of their salaries. However, there were always some crew members who abandoned the galleon and decided to remain in Mexico. Most, however, returned to the Philippines.

But, as it was difficult finding men to journey to the Philippines, where they were expected to work as soldiers in the various garrisons in the country, it was not unusual for the Spaniards to resort to press ganging men they found in public houses and inns for transport to Manila. In one case, there was the story of how the men were found in Acapulco and abducted for the returning galleon. The Spaniards would engage drunken men in a game of chance and if they lost, they were taken onto the galleon. Years later, Spanish government officials in Mexico began emptying out their prisons of petty criminals who were pardoned if they agreed to work in the Philippines as soldiers. Other undesirables such as vagabonds, vagrants and carpetbaggers were equally dispatched to the Philippines to work there in the

military garrisons or in some other capacity. In a typical galleon, sailing from Acapulco to Manila, there would have been as many as two to three hundred soldiers and crew members on the vessel.

The Galleon Carried the Royal Silver Subsidies (Real Situados) for Guam and the Philippines

Of the many individuals sailing on the vessel from Acapulco, there was a government official known as a "Silver Master." He was assigned to the job by the viceroy's office in Mexico City, and he was not considered a member of the ship's crew. His role on the vessel consisted of ensuring the safekeeping of the huge amounts of silver transported from Acapulco to Manila. He was assisted by several government functionaries who sailed with him to secure and protect the silver and to make sure that it was not tampered with or stolen. The silver was the payment for the previous year's exports to Acapulco, as well as the royal subsidy sent to Manila every year to maintain the colonial government in the Philippines, Guam and the Caroline Islands. When he arrived in Manila, the silver was turned over to the appropriate officials. He returned to Acapulco on the next available galleon with his assistants, who were basically passengers, with nothing to do on the ship. It was not necessary to have a silver master on the outgoing galleon from Manila to Acapulco, as the vessels generally carried cargo and not precious metals.

As the return route took the galleon almost on a straight line from Acapulco to Guam, it was the first port of call before arriving in the Philippines. Guam became a Spanish possession in 1565 when it was claimed by Miguel Lopez de Legazpi for the Spanish Crown. Before he arrived at the Marianas, he was already aware of the islands as they had been visited by Magellan in 1521. Magellan named the islands the "Islas de Ladrones," or "Island of Thieves," as tools and equipment went missing on his ships when natives boarded the ships. The natives of the islands, the Chamorros, were most probably descendants of an Indo-Malayan group of people originally from Malaysia, Indonesia and the Philippines. As a result of Magellan's expedition, Legazpi was expressly determined to stop in Guam before continuing his voyage to the Philippines.

Even though the islands came under Spanish control in 1565, they were not actually settled by them until 1665. At that time, the first settler was the Jesuit missionary Padre Diego Luis de San Vitores. He was born in Spain in 1627 to parents who were members of the country's nobility. Although his parents hoped he would follow a career in the military, they discovered that he had his heart set on following a religious path in life. In 1651, he became a priest, and he was sent to serve as a missionary in Manila. When he first arrived in Guam in 1662, as he traveled to the Philippines from Acapulco, he

already planned on returning to the Marianas at some future date. He returned to Guam in 1665 and on February 2, 1669, he established the island's first Catholic Church at Hagatna. He also gave the islands their name of "Islas Marianas," in honor of the Virgin Mary and Spain's Queen Maria Ana of Austria. His presence on the island was a short one, as he was murdered by a native on April 2, 1672.

Despite the death of Padre San Vitores, Spanish influence continued to grow in the Marianas. As the natives had converted to Catholicism, trade soon followed. Guam became a regular stopping off point for galleons from Acapulco. While anchored there, they re-supplied their provisions and took on fresh water. They also dropped off government and military personnel assigned to work there, as well as cargo.

A governor was assigned to manage the islands on behalf of the Spanish government. He reported to the governor of the Philippines, who was in charge of the Marianas. The first governor, Antonio de Saravia, was selected for the post in 1681 by the governor of the Philippines in Manila. While Saravia found that the new assignment was lonely, he was able to work and socialize with the small community of fellow Spaniards living in Guam. These included other government functionaries, military personnel and church clergy. They were apparently able to live quite comfortably on the island of Guam. Governor Saravia received a salary which was deducted from the yearly subsidy he received from the Spanish administration in Manila for his needs. "The maintenance of the Ladrones cost the crown about 34,000 pesos a year, which was sent out from Mexico as the situado. From this amount the governor drew 3,000 pesos. This lonely official enjoyed the freedom from superior control which his isolation permitted, and it is told of one governor that after the galleons had put in at Guam for two years in succession with orders and instructions from the king, he planned to remove his residence to another island in order to be freed from the surveillance of the crown. Connections with the outside world remained infrequent until the end of the Spanish regime over two hundred years later, and it is said that when an American warship appeared in the roadstead at Agana on Guam in 1898 and began firing, the governor hastily sent out to the ship a request for powder to return the salute." [182]

According to Lieutenant Philip Saumarez who was on the *HMS Centurion* with Commodore George Anson when they sailed there from Acapulco in 1742, he acknowledged that Guam was a stopping off point for the galleons arriving from Mexico. His description stated that, "As for the island of Guam it is the principal and most considerable of the Ladrones Islands (Marianas) having a Spanish governor and garrison but ill provided. They had a small port on the southwest part of it which mounts to five guns, nine posts and has

three companies of soldiers each consisting of 60 men - many of them Indians. There, the Acapulco ship on her passage to Manila, makes a short stay taking refreshments and exchanging her sick and infirm people for others and continues her voyage. They have besides a yearly ship of twenty guns from Manila which brings them clothing and pays for the subsistence of the garrison, but this is sometimes interrupted. "[183]

The Caroline Islands, to the southeast of the Marianas were also founded by the Spaniards in 1686. On an expedition to the area, which was financed by Charles II, the Spaniard, Francisco Lazcano, claimed the islands for the Royal Crown. The islands were also administered by the Spanish government in the Philippines. The islands consisted of a group of five hundred small islands which included Truk, Palau, Korsrae and Pohnpei. To the Spaniards they were known as "Nuevas Filipinas" or "New Philippines." The earliest inhabitants of the islands were Micronesians. There was no Spanish presence in the Caroline Islands until 1732 when a group of Spanish missionaries arrived there only to be murdered by the natives. In 1875, Spaniards again tried to exert their influence in the islands with little success. The islands were later sold to Germany during the Spanish American War of 1898. At the time, the Germans were already in the region and controlling the Yap Islands, which are located to the west of the Caroline Islands.

Exports from Mexico and Spain to the Philippines

The returning galleon from Acapulco to Manila only carried a minimal amount of cargo if compared to the vast quantities of goods carried by the incoming galleon from the Philippines. The exports included foods from Spain that were not available in the Philippines such as olive oil, olives, almonds, garbanzos, lentils, beans, semolina flour, coffee, sugar, corn, and fine Spanish wines and brandies, textiles, books, scientific instruments, embroidery needles, fans, soap, leather, playing cards and household furnishings. They also included Mexican produced items such as cocoa from Campeche, tobasco from Chiapas, chilies, woolens from Saltillo, cochineal from Oaxaca (used to dye fabrics a red color), precious metals (gold and silver bars), die-stamped weights, silver reales from Mexico and Peru, silverware from Taxco for use in churches and in homes, and livestock such as cattle and horses.

Clothing produced in Mexico was also sent to Manila on the galleon. These included the latest fashions for the Spaniards of Manila including gowns, undergarments for the ladies, hats and men's wear. One type of clothing, "gerquetas," was produced in Mexico for use by soldiers in the Philippines. According to Captain Sebastian de Pineda, he wrote that in 1619, when he was in the Philippines, that it was

cheaper and easier to source many types of clothing from China rather than from Mexico. He said that, “A quantity of gerguetas was also shipped from Nueva Espana to the said Filipinas. They are said to be for the use by soldiers, but that is unnecessary, for that land has other kinds of cloth, both those that are produced there, and others that come from China, which are better and cheaper. If your Majesty will order that to be stopped, it will be of much importance to your royal treasury, and will increase it by many ducados, while it will benefit greatly the soldiers who serve your Majesty in those islands, for, when this cloth is delivered there, they are obliged to accept it. ”[184]

The galleon usually brought to Manila a number of weapons including cannons, pikes with iron heads and other hand weapons. The weaponry was used by the military garrisons in the various fortifications scattered across the archipelago. The heavy cannons were placed in the hold and acted as additional ballast, as the ship was much lighter in weight than the incoming galleon from Manila.

The Route from Acapulco to Manila and the Stopover in Guam

The galleon departed from Acapulco at the end of March or in early April in order to avoid the annual Asian monsoons and typhoons which were expected in the Philippines in the coming June. The ship sailed south to latitude 15 degrees and then remained within latitude 14 and 10 degrees. It picked up the Northwest Trade Winds and the North Equatorial Current which propelled the vessel forward to Guam. From Guam, the ship continued on a westerly course still between latitudes 14 and 10 degrees and south to the island of Samar.

The voyage from Acapulco to Manila normally took about three months to complete. It was a much quicker journey than the outgoing voyage and for many on board it seemed more like a leisurely cruise. The ship sailed in almost a direct line from Mexico to Guam and reached the Marianas Islands in two months. A royal order from the king in 1668 stated that the galleons were to regularly stop in Guam on the return journey to Manila. During the month of June, when the galleon was expected to arrive in Guam, signal fires were continuously burning on the islands of Guam and Rota to alert the vessel that it was nearing land.

When the vessel arrived in Guam, it was anchored at sea as the waters closer to the port were too shallow for the ship to sail nearer to the shore. The port located in the southwestern part of Guam was defended by a small fort and approximately eighty Spaniards. Small boats were used to ferry the passengers and cargo to the shore, as well as to re-provision the ship before it sailed to the Philippines. No natives were allowed to board the vessel due to the fact that the natives helped themselves to whatever was on board.

After stopping in Guam for several days, it was an opportunity for

the commander and other officers on the galleon to meet with the governor of the island and officials based there. The commander turned over to the governor any documents sent to him from Spain and Mexico. Moreover, passengers traveling to Guam remained there, as well as any sick individuals on the ship. Cargo for Guam was also unloaded at that time. The galleon then sailed from Guam and continued in a westerly course, reaching Cape Espiritu Santo on the Philippine island of Samar after fifteen days. When the galleon arrived there, the Spaniards on land used a system of fire signals to guide the ship through the San Bernardino Strait. Normally, a boat with a pilot was sent out from Cavite to the San Bernardino Strait to meet the galleon and guide it through the maze of islands lying between the Strait and Cavite.

As the ship sailed with the currents, the voyage from the San Bernardino Strait to Cavite was usually quickly accomplished unless enemy ships were in the area and posed a threat to the vessel. If the weather was rough, the galleon stopped at the ports of Ticao or in Sorsogon to wait for the weather to clear up before proceeding to Cavite. The voyage from Guam to the Strait of San Bernardino and then to Cavite normally took another month to complete.

Arrival in Cavite and Manila

When the galleon arrived in Manila Bay, it sailed to the port of Cavite. It was there where the passengers and crew disembarked from the vessel and the cargo was transferred on small boats to warehouses in Manila. In Manila and Cavite, there was great jubilation and joy as the residents of both cities went to church to pray and thank God for the galleon's safe arrival. Throughout both cities, church bells rang out and the Spaniards began planning great balls and other festivities in celebration of the happy event.

But before anyone could leave the vessel or the cargo was removed, the ship had to undergo the inspection by the custom officials. There was no escaping the bureaucratic procedures set in motion by the Spaniards in Spain. The officials received the ship's register from the master and completed their inspection. Customs duties and taxes were paid by the merchants in Manila who received the cargo. Only then, were the crew and passengers allowed to disembark from the vessel, while the cargo was transferred to Manila.

The Spaniards realized that the ship brought great profits to Manila and ensured another prosperous year for them in the capital. Investors in the galleon trade were eagerly waiting to receive their profits from the sale of their goods in Acapulco the previous year. They knew that they could count on receiving as much as 100 to 300 percent in profits. The governor in Manila was equally eager to receive the royal subsidy of 250,000 silver reales and immediately arranged to meet

with the Silver Master who was in charge of the silver until it was turned over to him. The captain and officers of the ship retired to Manila to enjoy the festivities surrounding their arrival in Manila, while the crew members received their salaries and were released or retained to work on other vessels.

When the vessel was emptied of crew, passengers and cargo, it often sat idle at the port of Cavite until it was required the following year. Then it would undergo careening and repairs to prepare the ship for the voyage. Le Gentil described the events that occurred at the port of Cavite when a galleon arrived there. He said, "When the galleon returns each one (on the ship) gets his share of the money (that he has earned or invested in it) then it is that the balls, parties and dances commence. Everyone makes merry as long as the money lasts. The result is that persons who had but a moderate venture in the galleon soon squander the proceeds, and are left empty handed. They are then obliged to borrow money at a very high rate of interest for the next voyage. This is the way the Manilans comport themselves. This of course is not the invariable rule, but if the persons of the present generation do not consume their wealth, their heirs do it. The consequence is that Manila has never been a rich city – for can one call a maritime city rich when after an existence of nearly 200 years, one finds in it, but a few individuals whose wealth exceeds 1,500 francs or two million at the most, while all the others are either poverty stricken or but little better? I got this information from several trustworthy persons who know Manila well, because they have lived there from 30 to 35 years. "[185]

The Voyage of Fray Domingo Fernandez Navarrete from Acapulco to the Philippines

Fray Navarrete traveled from Acapulco to Manila on Easter Sunday April 12, 1648 on the galleon the *Buen Jesus*. He was a Dominican missionary born at Penafiel, Spain in 1618. He became a Dominican friar at the priory of Penafiel on December 8, 1635, and traveled to Mexico where he served as a missionary. When he sailed on the galleon, there were twenty-nine additional Dominican missionaries travelling with him to the archipelago where they planned to work as missionaries. The voyage took less than the usual three months to complete and arrived in the Philippines in mid-June 1648. Friar Navarrete and his companions arrived in Manila on June 23, 1648.

While Fray Navarrete served in Manila, he taught theology at the University of Santo Tomas. Eventually he also went to Bataan and the island of Mindoro to serve there as a missionary. In 1656, he traveled to China, Malacca, Ceylon, India and Portugal, and then returned to Madrid in May 1672. In 1673, he arrived in Rome and met with Pope Clement X. By 1677, he was appointed to the position of Archbishop

of Santo Domingo where he died at the age of 68 on February 16, 1686.

When the *Buen Jesus* arrived in the Philippines, the commander of the vessel learned that a Dutch fleet was in the area, and that they were aware of the galleon's arrival and location. As a precautionary measure and to prevent the ship from falling into the hands of the Dutch, he anchored at a place named "Lampon," which was most probably Lamon Bay on the east coast of the island of Luzon. To ensure that the Dutch did not capture the ship, he set it afire. The passengers, cargo and silver contained aboard the vessel were all transported to the shore before the vessel was destroyed. The passengers and crew later arrived in Manila aboard smaller boats. Fray Domingo Fernandez Navarrete and several other missionaries decided to go by land and walk to Manila rather than going on the boats. To them, the walk across the Philippine terrain appeared more daunting than the voyage across the Pacific. When the missionaries walked from Lampon to Laguna de Bay, they may have originally landed somewhere along the coast of Quezon Province. As they walked from the site where the ship was destroyed to Laguna Bay, their overland journey took only four days to reach the area of the bay. From there, they traveled by boat to Manila along the Pasig River. In the end, Fray Navarrete and his companions arrived in Manila safe and sound.

The following is Fray Domingo Fernandez Navarrete's account of his voyage on the *Buen Jesus* from Acapulco to the Philippines.

"On Palm Sunday (April 5, 1648), we dined aboard the vessel (*Buen Jesus*) on what our landlady sent us, for having received 400 pieces of eight for the hire of two small miserable houses which were furnished to us after the fire which I mentioned before. She showed her gratitude and treated us well. (The fire he mentioned, took place on the night of February 1648 a month before he sailed from Acapulco. The fire destroyed almost the entire section of the port of Acapulco during which several warehouses were also destroyed.)"

"We left Acapulco on Easter Sunday (April 12, 1648). Shortly after losing sight of land, the winds stopped and we were becalmed at sea. For eight days we suffered for lack of refreshing breezes and the prevalence of extreme heat. Later the winds blew and we resumed our voyage. For twenty-four days the winds never abated so that we sailed swiftly. The sea waves beat hard on the sides of our ship, making us very uneasy. The ship commander, who was an experienced navigator, said that the sea turbulence was caused by a strong current coming down from California. To save our ship from being engulfed by the soaring waves, all jars and pots on board were emptied and cast unto the sea. Chests of biscuits and hen coops were burned in the stove to

make more room for us, yet we had hardly enough space to stand. No one could stay under deck, for it was filled with provisions and commodities. All men were exposed to sun and air."

"After having sailed 800 leagues, we left Bartholomew's Island to the north, but saw it not. They say it is very small and destitute of all things. We had a dead calm for eight days again. The seamen and soldiers leaped into the sea to cool themselves, but would sometimes return hastily to escape the sharks. A very strange, and to appearance, miraculous, accident befell us. One day some men went below for water, to give all people their allowance. When they came up, I and many others observed that they were as pale as a cloud. We ascribed it to the great darkness under the deck. They kept their counsel, without giving notice there was anything more than ordinary, but later, when we were ashore, we heard that they, going down to look with a candle to see what water there was in the cask, had lit upon a barrel of gunpowder, in which the candle went out, without giving fire to it. Truly this seemed incredible, but certain it is, that had it taken fire, we would have been blown into the air before we could say, 'Lord have mercy upon us.' When we do not watch, our Guardian Angels watch for us, and help us in distress. When they told it to us, though we were then ashore, it made our flesh creep. One of those involved was an infantry captain named Balastain. "

"There was another extraordinary accident, but of no danger. The pilot was a Portuguese named Antunuz who no doubt knew his business. Daily he computed how many leagues we had sailed, according to his judgment. For in sailing from East to West there is no common rule. Until the present time the subject of fixed longitude is not definitely known and navigators simply guessed its exact location. Some among us assumed that we were past the Island of Thieves (the Ladrones), now called Marianas (Guam). This nettled the pilot who swore that it was not so, for we would not see these islands until next Sunday morning. Many among us disagreed with him so that a lively debate ensued and wagers were laid."

"At sunrise of Trinity Sunday, the pilot sent a sailor up to the top mast saying, 'This day before eight o'clock, we shall discover the islands.' It was very strange; about half an hour after, the sailor at the top mast cried out, 'Land ahead, land!' We all stood, amazedly with the sailor's announcement. By the afternoon, however, they saw no land, but four little sailboats. There was a great commotion amongst the passengers, blaming the sailor for his mistake. A sailboat approached our vessel. We prepared to welcome the natives on board said sailboat and barter with them for fresh provisions which they most likely had for nails and old iron. About nightfall the sailboat strangely vanished astern of us. How that came to pass, and who was

aboard, shall be said in another place. ”

“Three days after there was a great calm, and after it, followed a terrible storm. They lowered the top mast, and the commander was for cutting down the masts by the board. The pilot’s mate, who was an excellent seaman, opposed it. The violence of the winds put us off course. We sailed toward the channel of St. Bernardine (San Bernardino Strait and Samar Island, Philippines), but was forced to steer for New Segovia (now the town of Lal-lo in Cagayan Province, Philippines).” “Having reached the land of the islands (Philippines), we kept coasting along the shore full of sandbanks, shoals, and rocks. The pilot gave the steerman (helmsman) directions on what course to hold, and lay down to sleep. Other islands and shoals loomed ahead. Our commander ordered the man at the helm to steer towards the shore. The purser presently stopped us and cried, ‘A shoal ahead!’ They quickly shifted the helm, and we weathered it wonderfully, the vessel almost glancing upon it. The pilot woke up with the noise. He rose in anger and with good reason because they did not follow his orders. He turned the vessel from the land till we came to 14 degrees and a half latitude. Thus we arrived safely on midsummer eve at Casiguran de Baler (Aurora).”

“Next day some of our people went ashore to hear how things stood. The natives thought our men were enemies (Dutch or English). But being satisfied that they were not, they received us with hospitality. From the natives, we learned that the Dutch had been there with four ships, and had not the storm prevented it, they certainly could have captured us. There, we got a short account of events which happened in the country before our arrival - the great victories (against the Dutch in 1646 when Spaniards of the Philippines fought the Dutch and defeated them), his Catholic Majesty’s forces had obtained over the Dutch, and how the enemy still infested the seas. Our men brought back on board with them two Indians (Filipinos), who spoke several languages, and knew how to guide a ship to Lampon (Lamon Bay). Having heard this news we requested these natives to help us and they agreed to do so.”

“Under the guidance of the two natives, we sailed that night, and the following morning we were within a musket-shot of the shore. That afternoon we happily anchored at the port of Lampon (Lamon Bay). About midnight the winds blew furious at southwest, though they came overland our anchors gave way and drove our vessel to sea. The winds seemed to have been the effect of a special providence to keep off the enemy. That day the plates (silver) and other goods belonging to his Majesty and private persons were secured and the vessel was moved behind a small island (most probably Cabalete Island in Lamon Bay), so that the Dutch enemy might not see it in case

it should come to the port."

"We (missionaries and other passengers) set out for Manila, marching overland (they probably travelled from the area of San Lazaro towards Santa Cruz, Laguna Bay). The natives everywhere were overjoyed to see us, showering us with kindness, friendship and hospitality. Our great satisfaction was, however, diluted for the enemy, by mere accident, discovered our vessel and rushed to attack it. To prevent it from falling into enemy hands, its commander and his men set it on fire so that in an hour's time his majesty lost 36,000 pieces of eight. For such deed the commander was later condemned by some men and praised by others. "

"We traveled four days afoot, not a long road, for there was none, but over hills, rocks and inaccessible places. Some rivers we swam over, others we waded breast high. On the mountains which were very high and thick with trees, we found such multitudes of leeches, that there was neither means nor method of avoiding them. The blood ran from us all as we went. I declare it for a certain truth that I saw one making its way through a shoe. I called upon others to observe the strange sight and they stood amazed at it. It rained hard. We halted wherever night overtook us. The Indians made huts covered with coconut palm leaves, in which we lay upon the grass which was swimming in water. The next day we went down a hill, whose ascent was two leagues (some said more) and that day we descended all that we had ascended in three days previous. Some parts of the way were very rough, and the rain poured continuously. We stumbled on every step, and could not avoid it. I truly saw that some of my companions, upon sitting down, were swept along no little way by the rainwater. Yet with all these discomforts, we are well pleased and cheerful, which was hard to believe."

"We came to Apanguiel, where there was a fine monastery of our Father St. Francis, but we were so wet, dirty, weary and hungry that nothing less than all kinds of entertainment we met with there could have made us appear like human beings. Our cheerful state was in conformity with the great charity of the holy men of the monastery. The next day two friars arrived from Manila, which enhanced our comfort. Another, the father guardian named Friar Luke (Lucas), brought four of us, to his monastery. The church was beautiful, though the convent was not. The convent balcony was high and from it, one could see the panoramic beauty of Lake Bae (Laguna Bay), which is thirty leagues in circumference and has some islands in the middle and is surrounded on all sides with groves of coconuts and bananas, rivers, and marshes extremely pleasing to the eye. We afterwards visited other monasteries and still found everything new and rare."

"We set out in two boats for Manila, crossing the lake, and by nightfall, we reached Binangoa (Binangonan), where the father guardian, Friar Francis, welcomed us. The next night we continued our voyage to the mouth of the lake, where ten boats from Manila expected us. These boats were loaded with Chinese, Indians, and Mestizos who came to welcome us. We stopped in the town of Pasig, where we said Mass, after which we went aboard our boats and proceeded down the river (Pasig River) being notably entertained with fireworks, beating of basongs (Chinese gongs), and firing of muskets. The Chinese basongs amazed us, for though they are no bigger than an ordinary gong, they sound like a great bell. It is a strange instrument. The river is one of the finest in the world. That of Goa is wider and deeper, but this river is better set out with great houses, orchards, towns, and churches. We went into some places, which would surprise any European."

"We reached (June 23, 1648) the Bridge of Manila, a notable structure, where we saw numerous people of several nations welcoming us. We were received in our monastery with ringing of bells, and immediately we visited the miraculous image of Our Lady of the Rosary, who brought comfort to these islands in their afflictions and diseases. The sight of her alone rejoiced our souls and made us forget the past toils. The Father Provincial, as a singular favor and indulgence, granted to us eight days exemption from matins (early morning prayers). Those that came at other times said he had dispensed with them but for three days. The privilege granted us was thus very great. To say the truth, some of my companions went to the choir that same night, but I had not so much fervor of spirit as to perform that much." [186]

Chapter 16

The End of the Manila-Acapulco Galleon Trade Run

It could be said that the Spanish colony of the Philippines was changed forever after the British invasion of the Philippines. Perhaps it was the shock of losing the colony to another European power that surprised the Spanish officials in Manila, Mexico City and in Spain and made them think twice about the colony and how they managed it. They realized that as a result of the invasion, they were not as invincible as they had thought they were. In any case, after the invasion of the country, and its return to Spanish rule, it appears that business as usual changed in the Philippines, and this had a direct impact on its future, as far as trade was concerned.

"For most of the colonists, that is, the Spaniards, the rehabilitation of the Philippine economy after the British invasion in 1762-64 meant simply the restoration of the galleon trade. But it was not as simple as that. Granting that the trade could be restored, did it any longer suffice as the colony's principal source of income? Even before the war, there were those who believed that some radical change in the structure of Philippine trade was necessary to meet the altered conditions of world trade. Murillo Velarde was followed by Jose Calvo, Richard Bagge and Nicholas Norton putting forward similar proposals. The demand for a re-examination of Philippine economic policy gained strength after the British occupation when the need to repair the ravages of the war and the utter inability of Spain to send any assistance gave it an added note of urgency. "[187]

The British invasion of the Philippines, or rather the invasion of mainly Manila and Cavite, ended in 1763 with the signing of the Treaty of Paris in Europe. The warring parties involved in the Seven Year's War - England, France and Spain - agreed to end the conflict. Even though the treaty was signed on February 10, 1763, the British officers who were in Manila and in Cavite, and the British Governor of the colony, Dawsonne Drake, did not immediately hear of the treaty. They were informed of the war's end on August 26, 1763, when the two British vessels the *Houghton*, a man of war, and a frigate the *Hector*, sailed to the Philippines from Madras and brought the news to the governor in Manila. The commander of the *Hector* also brought a copy of the Preliminaries of Peace for the treaty. On October 15, 1763, another vessel the *Admiral Pocock* actually brought a copy of the peace treaty to the capital.

At that time, the British officials were able to convince a skeptical

Simon de Anda, who was the acting governor for the Spaniards and the colony, that the treaty was genuine. As a result, the British military officers made plans to return the colony to the Spaniards and arranged to leave the Philippines by the following year in 1764. Governor Dawsonne Drake was later replaced by Alexander Dalrymple, who was actually the individual who was in charge of returning the colony to the Spaniards in May 1764.

During the British takeover of the colony, they captured the galleon the *Nuestra Senora de la Santisima Trinidad* and a number of other vessels. The losses of the galleon's cargo, as well as those from the other ships, were the cause of much disruption and despair in Manila. The investors in the galleon had lost a fortune, as the British officers confiscated the cargo they had found. Moreover, while they were in power in Manila, the British, French and Sepoy soldiers ransacked and looted the city. When the British returned to India, they had left behind a city in ruins which had to be repaired and reconstructed.

Luckily, though, the incoming galleon the *Filipino* in 1762 brought to the country 2.5 million silver pesos which included the payment for goods sold in Acapulco the previous year, as well as the yearly subsidy of 250,000 silver pesos for the maintenance of the colonial government in the Philippines. The silver had been removed from the ship by Simon de Anda and moved to a safe location. Consequently, when Governor Francisco de la Torre took over the administration, Simon de Anda turned over to him the funds which were brought to the country on the galleon. Initially, the British were aware of the galleon's arrival in the country and the silver she carried and searched for her, but when they finally found the vessel they discovered that the silver had been removed from the ship. In frustration, they burned the vessel.

Governor Francisco de la Torre governed the colony from March 17, 1764 to July 6, 1765. It was up to him to begin the reconstruction of the areas which had been devastated by the British invasion. During his administration, Manila and Cavite's fortifications were improved. He was also instrumental in attempting to restore the colony's economy. At the time a special report, "The Demonstration of the Deplorably Wretched State of the Philippine Islands," was produced by Leandro de Viana, who was an economist with the Royal Audiencia in Manila. The essence of the report mainly posed the question of whether or not Spain should retain the Philippines. In his opinion, he recommended the retention of the country as it had a number of natural resources which could be profitably exploited. He understood that one of the reasons why the British had invaded the country was the fact that they were aware of the country's rich natural resources and knew that these had been largely untapped by the Spaniards.

Given the opportunity the British had every intention of turning the country's natural resources into a thriving business.

Leandro de Viana pointed out that other European countries were involved in the economic development of their colonies which, in turn, provided them with great profits. Unlike other countries, Spain had neglected to follow a similar path in the Philippines and was dependent on the galleon trade as its main source of revenue. He suggested that Spain take a new course of action where the Philippines was concerned, and concentrate on developing the country's natural resources. This included agricultural pursuits and the development of a market for products which could be grown or produced in the country such as: sugarcane, tobacco, rice, coffee, cacao, cinnamon, indigo and cotton.

He also suggested that the Spanish government should consider setting up more shipyards throughout the archipelago. He felt that as the Philippines was rich in natural resources such as timber, the shipyards could construct many sea vessels which could be used in commercial pursuits. The expansion of the country's shipyards would have also become a source of employment for Filipinos who could become skilled carpenters and mariners.

Another innovative idea, and probably a most insightful one as the galleon trade would end in the early decades of the nineteenth century, was to suggest that the Philippines begin conducting direct trade with Spain. According to Viana, the advantages of having a direct conduit to Spain, would have encouraged trade between the Philippines and the peninsula and possibly lead to the influx of a greater proportion of Spaniards into the archipelago. As discussed earlier, one of the major problems of the colony was the fact that there were never enough Spaniards living in the Philippines and as a result, there was no sense of continuity. The Spaniards felt that there was no incentive for them to move to a country that they thought of as having many hardships. Viana also thought that a direct connection to Spain would have meant that products could be exported to Spain and vice versa at lower prices. Rather than sending Oriental products first to Mexico, for transference to Spain, they could be shipped directly to Europe.

His most visionary notion was the establishment of a trading company along the lines of the British and Dutch East India Companies. Through the establishment of this type of company, he felt that the natural resources of the Philippines could be developed and sold worldwide. Another innovative idea was the suggestion that the Spaniards construct a canal in Panama, thus connecting the Pacific and Atlantic oceans and leading to increases in commercial trade with the Philippines and other countries.

When Viana's report was submitted to the Council of Indies in Seville, it was dismissed. His comments in the report, where he criticized Spain's mismanagement of the colony, had apparently irritated officials in the government. But he was undaunted by this and produced another report in 1766. The second report was entitled "The Financial Affairs of the Islands," and in it he discussed the country's economic situation after the British invasion. In the report he stressed the need to end the dependence on the yearly subsidy from the viceroyalty in New Spain, and the necessity to develop the economy and turn the archipelago into a self-sufficient possession of Spain. One of the main methods used to reduce the colony's expenses he suggested, was to cut the number of government jobs then held by Spaniards and reduce their salaries. Both measures would not have been embraced by the Spaniards then employed by the government. He also suggested that the paying of taxes to the government by Filipinos and other natives of the country could be managed more efficiently, and that no one was exempt from paying their taxes to the government.

To increase the government's revenue, he said that a monopoly should be established for certain products such as tobacco, coconuts and playing cards. He also said that there should be a monopoly on cockfighting, which has always been a highly popular form of entertainment in the country. However, his suggestions in his second report were apparently also dismissed by government officials in Spain.

After serving as governor for two years, Governor Torre was replaced by General and Field Marshal Jose Raon (1765-1769). As a result of the British invasion of the Philippines three important events took place. Firstly, the Moros or Muslims of Mindanao were encouraged by the invasion, and the ease with which the British were able to topple the Spanish regime in Manila, that they began raiding many Christian settlements in the islands. They also arrived in Manila Bay and attacked Mariveles (located on Manila Bay), and captured several Chinese vessels which were sailing to Cavite with goods for sale in the colony. Governor Raon initiated a military campaign to confront the Moro raiders wherever they were found in the archipelago.

Secondly, the Chinese residents of Manila, who corroborated with the British when they invaded the country, were expelled from the Philippines. According to a Royal Decree of April 17, 1766, the Chinese were sent into exile by Governor Raon. In other words, the very people who were most crucial to the success of Manila's economy were now no longer wanted in the country. But Governor Raon did not enforce the measure and some said that this was due to the fact

that he was provided with expensive gifts to ignore the ruling. Thirdly, the governor did not object to foreign vessels anchoring in Manila Bay and conducting trade with the Spaniards, Chinese and Filipinos of the capital. Even though government regulations in Spain had prohibited foreign vessels from coming to Manila for just such a purpose, Governor Raon welcomed them. According to Le Gentil, who was in Manila at the time, he said that he saw French and other foreign vessels in Manila Bay during the administration of Governor Raon. Apparently, the captains of the vessels also provided Governor Raon with expensive gifts in exchange for permission to anchor in Manila Bay.

An undertaking of commercial importance was the establishment of the "Manila Consulate." Governor Raon received a Royal Decree on December 13, 1769, in which he was instructed to set up the organization. It was composed of merchants and acted as a type of court which handled cases that concerned trade matters. The Consulate also had a court of appeals, which was presided by its own judge and two merchants representing the commercial traders of the city. Very important cases were turned over to the Council of Indies for their consideration.

Governor Raon was replaced in June 1770 by Simon de Anda (governed from 1770 to 1776). Anda was a well known figure in the Philippines and remembered for his role in the politics of the country during the British invasion. To many, he was a brave and courageous hero. One of his first acts was to arrest Governor Raon, who was by this time, in poor health and an elderly man of 70 years old. Even though he underwent a three year investigation, where his actions during his administration came under scrutiny, he was not convicted of any offenses. He died on January 4, 1773, before the investigation could be concluded.

While Simon de Anda was in Spain, he was recognized as an expert on anything connected to the Philippines. As a result, government officials turned to him whenever they had any questions concerning the archipelago. "Anda took great interest in economic problems of the country which he did not cease to study even during his years in Spain from 1767 to 1770. During these years he was often sought regarding his views on the Philippines by the Spanish government. For example, he drew up a lengthy paper discussing the advisability of establishing direct trade between Spain and the Philippines. He was asked to comment on Viana's economic development plan. It was expected that with his experiences in the Philippines and knowledge of it, he was in a position to set in motion a number of development projects."

"He gave strong encouragement to the mining industry by sending

out numerous expeditions to locate iron deposits, causing studies to be made of the most advantageous sites for mills, and drew up himself an ambitious production plan. He gave government support to Salgado's experiments with cinnamon cultivation, and it was under his auspices that an important exploratory voyage was made to establish a new trade route to New Spain passing around the southern extremity of the archipelago. The object was to see whether a sailing ship could make the voyage to Mexico no matter what the season of the year in order to eliminate once and for all the interdiction of the annual voyage and the loss of ships caused by the typhoons of the Pacific. This problem was brought forcibly to Anda's attention during the first years of his government when the galleons could not make the crossing and silver currency as a consequence became critically short." [188]

When Simon de Anda returned to the Philippines from Spain, to take up his position as governor, he was already planning to develop the country's iron mines in Santa Ines and Angat. For this reason, he was accompanied by a mining engineer, Dionisio O'Kelly. Anda was also interested in developing the country's deposits of tar in Zambales, which had apparently supplied the Cavite shipyard with all the tar it needed to construct sea vessels.

After six years of toiling as the governor of the Philippines, Simon de Anda died on October 30, 1776 at the San Felipe Hospital in Cavite. After his death, the position of governor of the Philippines was temporarily held by Deputy Governor Pedro Sarrio. On July 28, 1778 the officially appointed new governor of the Philippines, economist, Jose Basco y Vargas, took up his post in Manila. Under his administration, the colony was able to have a semblance of stability as he governed the country for nine years. The Basco administration also marked the beginning of real economic development for the Philippines.

He was not happily received by the Spaniards of Manila who saw him as lowly born common man. As a result, they petitioned the king to replace him and requested that a new governor should be appointed who was an aristocrat. But the king held Basco in high regard and kept him in his post. Basco also had a strong character and this probably enabled him to withstand the barbs and insults thrown his way by the Spanish gentry of Manila. According to the Bishop of Nueva Caceres, Fray Juan Ruiz de San Agustin, he wrote some comments about Basco's character saying, "The governor is active, zealous, just, and a man of integrity." [189]

Governor Basco initiated an economic development program which entailed making the Philippines self-sufficient and monetarily independent from Mexico. The goal was to develop the country's natural resources and expand the agricultural products produced in

the archipelago. His program was detailed in his report which was entitled the "General Economic Plan." Perhaps by this time, it was possible that as the political situation in Mexico was changing, visionaries such as Governor Basco could see that the end of the galleon trade run was rapidly approaching. As a result, he understood the necessity of finding other methods to provide for the colony's welfare.

In any case, Basco's program was based upon an incentive scheme whereby farmers were awarded gifts for growing larger quantities of spices such as cinnamon, cloves and pepper and other commodities: silk, cotton, coffee, and flax. Another measure formulated by Basco was the establishment of an organization to develop the country's economy. As a similar program was already operational in Spain, and in other colonies in the Americas, Charles III (1759-1788), instructed Governor Basco to set up the same type of organization in the Philippines. It was founded on January 18, 1779 and was known as the "Economic Society of Friends of the Country" or the "Real Sociedad Economica de los Amigos del Pais." The Society was involved in five areas: agriculture and the economy of rural regions of the country; factories and the production of goods; trade in the domestic and foreign markets; education and industries, and natural history. The first president of the Society was a lawyer and judge of the Royal Audiencia in Manila, Ciriaco Gonzalez Carvajal.

With the backing of the Economic Society, the economic development of the Philippines began to improve and expand. Farmers began cultivating the production of indigo with the first shipment sent to European markets on the vessel *Asuncion* in 1783. Through the assistance of the Economic Society, the country began developing its weaving, textile industry, coffee and tobacco production, rice fields and abaca cultivation. A number of monopolies became the norm in the Philippines covering some of the commodities produced in the country. For example, in 1782 a tobacco monopoly was established by Governor Basco. This meant that the tobacco grown in the country came under the supervision of the Spanish government in Manila. The government determined how much tobacco could be grown in the country, as well as how much it would be sold for, with any extra supplies of tobacco destroyed. Even though the tobacco monopoly brought into the country great profits, as it produced cigars and cigarettes which were popularly sold, the monopoly ended in 1882. As a result of the monopolies on tobacco, wine, gunpowder, betel nuts, and playing cards, the country, for the first time, since it became a colony of Spain, was able to support itself.

The Spanish Frigate *Buen Consejo* Begins a Direct Trade with Spain

In the Philippines, the notion of establishing a direct trade between the archipelago and Spain was not a new idea. In fact, in 1753, the Jesuit priest, Father Jose Calvo wrote to the Spanish King, Ferdinand VI, suggesting that the Philippines trade directly with Spain in order to develop the country's economy, as well as to induce Spaniards to migrate to the archipelago. This was followed up in 1759, by an Englishman who had become a naturalized Spaniard and was living in Manila as a trader, Nicholas Norton Nicols. He proposed that a direct trade route be established with Spain from Manila. He said that cinnamon and other commodities could be grown in Mindanao and sold in Europe. He thought that the commodities could grow on his own plantation in Mindanao. Then, of course, there was Francisco Leandro de Viana, who was mentioned earlier, and had recommended to Charles III that a direct trade be established between Spain and the Philippines in 1765.

As a result, Charles III sent a frigate from Cadiz to Manila to start the first direct trade between Spain and the Philippines. The Spanish Royal Navy's vessel the *Buen Consejo* (Good Advice) of 64 guns and under the command of Captain General Juan Caseins (a Frenchman employed by the Royal Navy), sailed from Cadiz on March 1, 1766. The ship sailed to South America and anchored for a time at Rio de Janeiro before continuing around the Cape of Good Hope in Africa and then across the Indian Ocean to the French held island of Mauritius. She anchored there, taking on fresh water and provisions before proceeding to the Philippines. While there, Le Gentil, who was in Mauritius, booked passage on the galleon. As a result, he was able to leave an eye witness account of his journey and experiences during the voyage to the Philippines. The *Buen Consejo* arrived at Cavite on August 15, 1766.

The response to the arrival of the *Buen Consejo* in Manila was negative. The merchants in the capital were afraid that their profitable trade with Acapulco was coming to an end. To them, the ship was known as the "Mal Consejo" (Bad Advice), rather than the *Buen Consejo*. As a result of their fears and antagonism towards the commander and officers of the vessel, they did everything they could to prevent the vessel's cargo from being sold in Manila. They also prevented the commander from purchasing Filipino goods and provisions for his return journey to Spain. Despite all this, the ship sailed from Cavite on February 12, 1767 with a small cargo of Filipino goods. One of the passengers on the vessel was Simon de Anda, the Philippine hero during the British invasion of the country.

Even though the merchants in Manila were angered by the attempt to establish a direct trade link between Spain and the Philippines, the king was still a proponent for its continuation. The ship made a

second voyage to the Philippines arriving in Cavite on July 8, 1769. This was followed by other vessels travelling directly from Spain to the Philippines to conduct trade. The last vessel to sail the route to the country was the *Asuncion*, which embarked from Cavite to Spain in 1783.

The journey of the *Buen Consejo* was described by Le Gentil. He wrote of Captain Caseins' first and second voyages to Manila from Cadiz. Interestingly, Le Gentil acknowledged that a direct trade between Cadiz and Manila could not have succeeded until the trade with Acapulco ended. Perhaps by 1766, Le Gentil was already able to envision a day when the galleon trade run was no longer a viable channel of commerce between the Philippines and Mexico. Presumably, government officials in Spain were also aware of this possibility and realized that the Manila-Acapulco commerce would inevitably end one day. After the American Declaration of Independence in 1776, there may have already been inklings in the Spanish colonies that its citizens were also heading in the same direction. These notions would have impacted upon Spain's hold of her possessions in the Americas.

In any case, Le Gentil wrote the following saying that the Spaniards of Manila, "…believed that the arrival of Caseins was the beginning of the end of their trade with Acapulco. Indeed it appeared that Spain was contemplating the establishment of a trade route between Cadiz and Manila and that the *Buen Consejo* was sent out on a trial trip. Caseins was selected to command this expedition. The officer knew Manila as I have already said and the king could not have made a wiser choice. As this was the first voyage, the king of Spain asked the king of France to let him have two navigators with experience in the Indian Ocean and the China Sea. That first voyage greatly resembled the voyage of the early discoverers on account of the time it took. The *Buen Consejo* stopped first at Rio de Janeiro and then at Mauritius. It was there that I embarked. The ship reached Manila until seventeen months after her departure from Europe. News of this expedition had been received in Manila by way of Mexico, but the arrival of the ship was no longer expected. It was believed that she encountered difficulties in passing through the Straits of Sunda, as the Dutch had endeavored to prohibit the passage of vessels through that Strait. I know that the people of Mauritius were very much surprised to see a Spanish vessel in those waters, and that in answer to some questions which were addressed to the Spaniards concerning their voyage, they replied that no one could prevent them from going to one of their own possessions." [190]

"The ship the *Buen Consejo* was not at all well received in Manila. She was referred to as the Mal Consejo. She was on the verge of not

being able to return to Europe on account of the lack of sea biscuit, for upon her arrival, there was a sudden shortage of flour. Nevertheless, she took on a cargo of more than 200 bales of merchandise. The first success, slight as it was, did not satisfy Caseins. He doubtless reported to the Court everything which had occurred and although he was very much dissatisfied with Manila, he sailed the following year with the same ship on his second voyage. This time he was more unfortunate. He relied too much upon his own experience and determined to go without carrying skilled French pilots, familiar with those waters. We heard in Pondicherry, that he failed to make the Straits of Sunda and had been obliged to go through the Straits of Malacca and to stop there. Don Esteban Roxas y Melo sent me the same news from Manila. Caseins had hardly made his way through the Straits of Malacca en route to Manila when he encountered a monsoon. He was obliged to put back to Batavia." [191]

"It was Don Esteban who sent me the information from Manila, the following year that Caseins finally arrived there on July 9 after eighteen months of navigation. He left the following month of January on the galleon *Santa Rosa* bringing with him the Jesuits from the Philippines. I do not know how many bales of merchandise Caseins loaded on his ship or all the trouble he had with the Governor Don Jose Raon. He must have had some sharp disputes with him about the *Santa Rosa*. This officer, as I was told on board the *Astree*, believing and with reason, that the governor might attempt to deprive him of his liberty, wisely remained on board his ship with the intention of defending himself there, if necessary. He died on the return voyage. Don Jose Raon was afterwards arrested and imprisoned. Since the death of Caseins the Court of Spain has sent only frigates to Manila. It was one of these frigates named the *Astree* that I returned to Europe. There appears to be no probability of establishing an important trade between Cadiz and Manila until trade relations are established between Manila and India, and commerce between Manila and Acapulco is abolished. The news published in 1779 carried the report that the beginning of that year a merchant vessel sailed from Cadiz to China and Manila." [192]

The Royal Philippine Company (Real Compania de Filipinas)

The successes of the British and Dutch East India Companies in the Far East, no doubt influenced Spain's decision to establish a trade company of its own in the Philippines. As a result, on March 10, 1785, Charles III, in a Royal Decree ordered the establishment of the Royal Philippine Company. The primary purpose of the Company was to encourage a continued direct trade between the Philippines and Spain, as well as the development of the archipelago's natural resources. The Company invested its own funds in the development of the agriculture

and industries in the islands. To ensure the growth of commerce between the Philippines and Spain, the Company was turned into a monopoly to control the trade. This, in essence, was a blow to the galleon trade between Manila and Acapulco, as the Oriental products which the vessels normally carried to Mexico for re-exportation to Spain, could now be sent directly to the mother country without having to pay customs duties in Cadiz. The galleon trade to Acapulco had become superfluous.

Where shipping was concerned, the Royal Philippine Company was permitted to fly the royal flags. Vessels could be chartered by the Company rather than depending on the government to pay for the construction of the ships that they could use. It was also permitted to purchase foreign vessels and register them as Spanish ships. As such, they were free to import supplies and equipment duty free in order to outfit the ships and prepare them for their voyages. They were free to hire Spanish Royal Navy officers who were accorded all the rights and privileges they received when in service to the Spanish government. The Company could also hire foreign crew members for the vessels, but the captain general of the ship and the other officers had to be Spaniards. Any restrictions on direct trade or the importation into Spain of goods produced in China, Japan or India was suspended. Any agricultural products and goods produced in the Philippines were also allowed duty free into Spain. In order to ensure that the Company's profits continued to increase, foreign vessels arriving in Manila were only allowed to bring Asian goods to the capital and not European products. The restriction of allowing galleons to sell goods directly to other colonies in the Americas, other than in Acapulco, was now also suspended. The Company's vessels were allowed to sail to ports in South America and sell their cargoes there.

"Up to this time the port of Manila was closed to all European shipping except of course, Spanish, and during the dynastic union between Spain and Portugal 1580-1640, Portuguese. However Asian vessels were not similarly excluded, and so English, French and other traders could call by flying the flags of some Asian country, a subterfuge winked at by local authorities. In 1790, the Royal Philippine Company, which was licensed to purchase Asian goods but only at Manila, obtained permission for European ships to enter under their own flags if they brought only Asian goods. There followed the confused period of the Napoleonic wars, when no one knew from day to day what side Spain was on. It is difficult to determine what policy Manila followed in the circumstances if indeed it had any consistent policy at all. At any rate, ships practically of any registry were admitted at one time or another during the following decades and it no longer mattered what cargo they brought." [193]

As a result of the lifting of all previous restrictions on the trade between Spain and Asia, the Royal Philippine Company initially proved quite successful. However, by 1792, the Company became less important and its early successes diminished. In 1803, Charles IV (1788-1808), the son of Charles III, tried to invigorate the Royal Philippine Company by providing the organization with additional funds and increasing its privileges. These included the fact that it was allowed to sell shares in the Company to foreigners, as well as permitting its vessels to conduct a direct trade with China and India without having to sail to Manila first.

Even though government regulations restricted Europeans from living or working in the colony, Charles IV passed a Royal Decree of August 14, 1789, which temporarily opened Manila to world trade for three years. The measure was passed as the Royal Philippine Company was already in dire straits, and it was hoped that the foreign trade would stimulate the ailing company. But the new privileges were not able to revive the Company and it was discontinued. It was no longer of any use to Spain. A Royal Decree of September 6, 1834, ended the Royal Philippine Company's role in trade. The measure opened the door to Manila and allowed foreign trade houses to operate in the capital.

Thoughts of the Philippines as a Separate Viceroyalty

In 1787, Governor Basco, after having served as the chief administrator of the Philippines for nine years, was worn out and tired. He returned to Spain exhausted and ready to enjoy retirement. He was succeeded by the Fleet Brigadier of the Royal Navy, Felix Berenquer de Marquina. The new governor took up his post in Manila on July 1, 1788.

One of the interesting schemes proposed by Governor Marquina was the idea that the Philippines should become a separate viceroyalty. He envisioned a viceroyalty for the Philippines, which would have been modeled on the viceroyalty of New Spain. On another note, he stated that the Chinese should be encouraged to migrate to the Philippines, as they had a natural propensity for commerce and would contribute to the economic growth of the colony. Similarly, he thought that farmers in Spain should also be encouraged to move to the Philippines where they could continue their farming activities and increase the agricultural yield of the country. Unfortunately, his suggestions were all ignored by the Council of the Indies in Seville. He resigned as governor on September 1, 1793, and was replaced by General Rafael Maria de Aguilar, Knight of the Order of Alcantara (1793-1806).

When Governor Aguilar began his administration in Manila, one of the first things he did was to reinforce the city's military defenses, as there were rumors that the British were once again planning to invade

the country. However, the rumors were unfounded and the British never turned up in Manila. Nevertheless, the Spanish government sent five warships to Manila from Cadiz to protect the colony against a possible invasion. The vessels were under the command of Rear Admiral Ignacio Maria de Alava y Saenz de Navarrete (1750-1817). The fleet arrived in Manila Bay on December 25, 1796. At the time, Spain was allied to Napoleon and France in a war against England. Their own problems with France had not yet begun, but by sending a squadron of vessels to Manila, it was an attempt to show solidarity with their French ally against the British.

As the British did not invade the Philippines, Rear Admiral Alava decided to go after the enemy and attack their fleet which was returning from China to England. However, their vessels were caught up in a terrifying storm which almost destroyed them, and they instead returned to Manila for much needed repairs.

Interestingly, about this same time period, Charles IV, in a Royal Decree of September 24, 1796, transferred the operations of the San Blas shipyard in northern Mexico to the port of Cavite. The port of San Blas had been turned into a shipbuilding facility in May 1768. It served as main port for vessels sailing to Alta California (from San Diego to Monterrey) and Baja California. The development of the San Blas port and shipyard took place relatively late in the colonial period. It was originally established by the inspector general for Charles III, Jose de Galvez, who was interested in the Spanish possession of California. He was particularly concerned by the need to protect the area from English, Russian and Dutch encroachments. He thought that these countries were interested in expanding into California and he was worried that the Spaniards might lose the territory to one or all of these groups. In order to defend California, the port of San Blas was established. From this port, ships could be sent to explore the territory and set up a base of operations in Monterey, California to defend the area.

In addition to the commercial changes in the Philippines during the eighteenth century, the country also witnessed developments in its military defenses. In command of the seaport of Cavite was Juan Villar, who was previously a naval architect from Havana. During his presence in the colony, in the last decade of the eighteenth century, a Philippine navy was organized in Cavite. To protect the naval shipyard and Manila, shipwrights in Cavite began building gunboats which were armed with light weaponry.

A government institution known as the “Naval Bureau,” was established by Royal Decree on September 27, 1800. Rear Admiral Alava was put in charge of reorganizing the naval forces of the Philippines and initiated the country’s first navy. Alava embarked

from Manila for his return journey to Spain on January 6, 1803. He arrived in Cadiz on May 16, 1803 and was appointed Vice Admiral. While in Spain, he participated in the Battle of Trafalgar, and then was assigned as Commander in Chief of the Navy in Cuba in 1810. He returned to Spain in 1813 and served in the administration of the governor of Cadiz. By February 1814, he became a member of the Spanish Admiralty. In February 1817, he was appointed Admiral of the Spanish Fleet, but died that same year in May.

While Governor Aguilar served as the chief administrator of the Philippine colony, he strictly carried out the Royal Decree of February 2, 1800, which stated that white foreigners were not permitted to live in the Philippines. This was followed by similar decrees issued in 1807 and in 1816. The short lived liberality of the Royal Philippine Company towards foreign trade seemed to disappear overnight. In any case, Governor Aguilar resigned as the head of state on April 7, 1806 after having served in that post for thirteen years.

From the 1820s onwards, the Spaniards had no choice but to open the Philippines to foreign trade. Foreign companies, which had a vision for the country's economic growth in the future, found many areas of commercial interest and potential for exploitation and expansion. One of these areas was the sugar industry which was largely to become one of the major exports from the Philippines under the auspices of British investors and trade companies.

The Last Galleons Sail from Manila to Acapulco

During the first decade of the nineteenth century, when Mexico was involved in its struggle for independence from Spain, the galleons which sailed from Manila to Acapulco were not always able to sell their cargoes. The *San Fernando* sailed from Manila in 1800 to Acapulco accompanied by two warship galleons the *Fama* and the *Lucia*. Obviously, the problems in Mexico by this time, between the pro-independence revolutionaries and the Spanish government, may have necessitated the need for a military escort, as it was highly unusual during the trade run in former years for a galleon to be escorted by other vessels. The galleon normally sailed on her own and unaccompanied. There may also have been predatory enemy vessels in the region of the Philippines, which necessitated the need to have escort ships.

In 1802, several galleons and military vessels sailed to Acapulco from Manila. The *Rey Carlos* sailed to Acapulco and was also escorted by two military ships the *Guia* and the *Casualidad*. During the voyage, the galleon was thrown off course from the other two escorting vessels, but eventually turned up at the port of San Blas. Another vessel the *San Francisco Xavier*, originally from Lima, Peru, also sailed from Cavite with three escort vessels to Mexico. The *San Francisco*

Xavier was owned by the Royal Company of the Philippines. Two other galleons sailed from Cavite to Acapulco that same year: the *Montanes* and the *Filipino*. The *Montanes* arrived in Acapulco, but was unable to sell her cargo and returned to Manila. The *Filipino* sold only a small amount of goods and also returned home to the Philippines.

In 1803, no galleon sailed to Acapulco from Manila, but in 1804, the *Concepcion* sailed to Mexico, but it is unclear if it was able to sell her cargo. By 1804, the *Rey Carlos* traveled once again to Acapulco from Cavite again with two military escorts the *Montanes* and the *Casualidad*. When the galleon arrived in Acapulco, she was unable to return to Manila for three years. In 1805, no galleon sailed to Acapulco, but in 1806, the *San Fernando* sailed to Acapulco from Cavite. During its journey to Mexico, it was captured by British vessels and taken to Macau. The British commanders demanded a ransom from the Spanish government in Manila for her return to them. The Spaniards and the British came to an agreement, as the *San Fernando* sailed again to Acapulco in 1809.

A galleon sailed to Acapulco in 1810 from Cavite. When it arrived in Acapulco, the trade fair was not held in the city. In any case, the entire cargo was purchased by six merchants from Mexico City for 1.8 million silver pesos. Another vessel the *San Carlos* sailed to Acapulco but was unable to unload her cargo due to the siege of the city by the Mexican revolutionaries. The ship sailed to the port of San Blas, but was again unable to sell the cargo. In 1812, there was no galleon, but in 1813 the *San Antonio* sailed to Acapulco.

In 1812, the War of Independence began in Mexico. The city of Acapulco and its Spanish forces, under the control of the Royalist Commander Francisco Pares, were attacked by pro-independence revolutionaries at the Battle of Tres Palos. The revolutionary soldiers were commanded by Jose Maria Morelos y Pavon (1765-1815). Morelos' mission was to capture Acapulco and disrupt the galleon trade. After the capture of the city in 1813, its structures were set afire.

"Fort San Diego owes its fame mainly to the long siege by Morelos the brilliant insurgent leader in 1813. The Spanish garrison commanded by Captain Pedro Antonio Velez, heroically resisted the Mexican attacks but decimated by sickness and hunger, and in the face of an imminent decisive attack it finally surrendered on August 20. Many arms, munitions, flags and 200 prisoners were captured. Months later Morelos was forced to retreat to Pie de la Cuesta, by the advance on Acapulco of a strong Royalist column but before withdrawing, he dismantled the Castle of San Diego. After destroying gun carriages, he put the few cannons he could not take with him out of action by nailing them down and obstructing their barrels with

cannon balls and pitch." [194]

In response to a recommendation from the Philippine Deputy to the Spanish Cortes, Ventura de los Reyes, Ferdinand VII abolished the Manila-Acapulco galleon trade run by Royal Decree on April 13, 1815. On February 6, 1821, the king also abolished by Royal Decree the subsidy sent to the Philippines annually for the maintenance of the colony's government.

In Mexico City, with the demise of the galleon trade, the Parian marketplace located in the capital's main square, was dismantled by the government. An order of June 27, 1843 stated that the Parian, which had catered for 140 years to the trade involved with the Pacific galleons, had to make way for a new "Plaza de la Independencia." The plaza was to be constructed in commemoration of the hard won Mexican independence from Spain in 1821. Even though the merchants of the city were against the destruction of the marketplace and pleaded with the government to preserve the structure, their entreaties were ignored. By September 11, 1843, the Parian was completely demolished.

The galleon the *Magallanes* (also known as the *Rey Fernando*) was said to have been the last official galleon of the trade run. When the ship arrived in Acapulco in 1811, it was stranded there for four years before she was allowed to return to Manila in 1815. The revolutionary commander, Jose Maria Morelos, prevented the unloading of the galleon and the sale of her cargo.

After the return of the Magallanes, other vessels traveled to Mexico, but they sailed to other ports on the country's west coast and not to Acapulco. These included the ports of Guaymas and Tepic. Two frigates sailed to Mexico from the Philippines in 1815: the *Santa Rita* and the *Victoria*. No vessels sailed from Manila to Mexico in 1818. In 1819, a number of frigates sailed to Acapulco from Cavite and they included the following vessels: the *Santa Rita*; the *Nuestra Senora del Carmen*; the *Felix Emprendador*; the *Carmo*, and the *San Rupert*. All of the frigates were unable to sell their cargoes in Mexico.

The fact that the galleons and frigates were unable to sell their cargoes in Acapulco was most probably due to the unstable political situation in Mexico. Asian goods had always been popular in the Americas, but if Mexico was undergoing such a turbulent period with the advent of the war of independence, it seems likelier that people were more concerned with their safety than buying goods brought to Acapulco on the Manila galleon.

In 1820, a ship sailed to Acapulco, but it was seized along with her cargo by the Royalist Commander General Agustin Cosme Damian de Iturbide y Aramburu (1782-1824). During this same period of time, a mule train traveled from Mexico City to Acapulco with 525,000 in

silver pesos in payment for the cargo which had been brought to Acapulco by the galleon. The silver was to be sent to the investors in Manila on the next ship sailing from Acapulco, but it was confiscated by General Iturbide to fund the independence movement.

Interestingly, Iturbide was initially a Royalist but in the latter stages of the war against the revolutionaries, he switched to their side. As a result, from September 28, 1821 to March 19, 1823, after Mexico gained its independence from Spain, Agustin Iturbide was installed as the country's first emperor on July 21, 1822 in Mexico City. However, his reign did not last very long as he abdicated on March 19, 1823. He was replaced by the Mexican Republic and in 1860, Mexico selected its first president, Benito Juarez.

A brigantine the *El Feliz* was sent to Acapulco in 1822 on a special mission. The commander of the ship sought out reparations from the Spanish government for the loss of the 525,000 silver pesos the previous year, but his pleas were ignored in Mexico. When he returned to Manila, the link between the Philippines and Mexico was irretrievably broken. When the Mexican War of Independence ended in 1821, the Manila galleons were no longer received at the port of Acapulco. However, the Spaniards in Manila still continued to insist that the new government in Mexico City reimburse the investors in the Philippines for the loss of the cargo and payment of 525,000 silver pesos. Claims for the payment continued into the 1830s, but it does not appear that the matter was ever settled.

Wars in Spain and in Mexico End the Galleon Trade Run

The end of the galleon trade run came as a result of three events which led to the loss of Mexico and the other Spanish possessions in North, Central and South America. The first was the fact that the people of Mexico rose up against the Spanish regime which had been in power in the country since the sixteenth century. The Mexican pro-independence army declared their independence from Spain on September 16, 1810, but it was not officially recognized by Spain until September 27, 1821. As a result of this, Acapulco had been occupied by pro-independence armies, and this ended the galleon trade from continuing at the port city.

Secondly, events in Spain during the last decade of the eighteenth century and the first decade of the nineteenth, was a time of political turmoil in the peninsula. As a result, it was no wonder that revolutionaries in the colonies of the Americas, including Mexico, saw this as the perfect opportunity to seek independence from Spain. In brief, Spain declared war against France in 1793 when the French Republic executed Louis XVI. Peace was established between France and Spain in 1795, but it was short lived. When Emperor Napoleon of France declared war against England and Portugal in 1807, French

soldiers marched across Spain to enter Portugal, but in the process they occupied the country and placed Napoleon's brother, Joseph Bonaparte, as the ruler of Spain. As Napoleon's older brother, he was appointed King of Naples and Sicily from 1806 to 1808 and then King of Spain and the Indies from 1808 to 1813. He was officially known as Joseph I of Spain.

Naturally, the interference of France in Spanish politics and the monarchy, led to the eruption of revolts across the peninsula against the new regime. The war against Joseph Bonaparte was known in Spain as the War of Spanish Independence (also known as the Peninsula War). The French were finally ousted out of the country in 1814 and the Bourbon King Ferdinand VII was proclaimed the new monarch of Spain. As a result of this time of great difficulties in Spain, the country's economy was destroyed and political instability became the norm in the nation.

Thirdly, blame could be leveled at the 1812 Cadiz Constitution in Spain which was re-established in the country in 1820. The constitution called for a "constitutional monarchy" which in essence restricted Ferdinand VII's authority in Spain. As a result, officials in Mexico worried that the Bourbons might be forced to leave the peninsula and this led to the unraveling of the viceroyalty in New Spain. Moreover, Mexican members of the nobility attempted to receive autonomy for their region. It was thought at the time that if the Bourbon king had to go into exile or was overthrown, he could become the king of an autonomous Mexico. Meanwhile, the revolutionaries were already planning to seek independence for their country.

As a result of the Mexican War of Independence against Spain, and the occupation of Acapulco by the revolutionaries, the galleons were no longer welcomed there. This meant that the Spanish government in Manila had to find another way of maintaining the colony and its finances. It could no longer depend on the revenues it received from the operation of the galleon trade, as well as the yearly subsidy sent to the colony from the viceroy in New Spain. As the Spaniards had never taken an interest in developing the country's natural resources, they were faced with a dilemma.

The troubles in Spain and the independence of Mexico led to a domino effect of other countries in Central America declaring independence. The Central American countries were at first part of Mexico when it gained independence, but they soon fell away from Mexico and declared independence for their own regions. As a result, Guatemala declared independence on September 15, 1821, but it was not recognized by Spain until many years later on July 25, 1850. The other countries which declared independence during the first decades

of the nineteenth century were: Peru – independence on July 28, 1821; Honduras – declared independence on September 15, 1821, recognized by Spain on March 15, 1862; El Salvador – independence on September 15, 1821 – recognized by Spain on June 24, 1865; Nicaragua – independence on September 15, 1821 – recognized by Spain on July 25, 1850; Costa Rica – independence on September 15, 1821 – recognized by Spain on May 10, 1850, and Panama declared independence on November 28, 1821 and was recognized by Spain on November 3, 1903 (after the Spanish American War ended).

When Spain finally recognized Mexico's independence, the last Viceroy for New Spain was Juan O'Donoju y O'Rian (O'Donahue-O'Ryan). Viceroy O'Donoju was born in Seville in 1762 of Irish descent and served as viceroy from July 21, 1821 to September 28, 1821. As a career military officer, he initially joined the army at a young age and distinguished himself in various military campaigns in Europe. He was so highly esteemed that he was given the appointment of becoming an Aide de Camp to Ferdinand VII. When he was appointed viceroy to Mexico, Spain was already discussing the possibilities of extending greater autonomy to the colonies in order to allow them to govern themselves directly rather than depending on Spain. This was probably in response to the upheavals in Mexico where revolutionaries were eager to see the end of colonial rule. Moreover, it was apparent that if Mexico became independent, all the other countries in Central America would also declare their independence which was, obviously, the case.

Viceroy O'Donoju arrived in Veracruz, Mexico on August 21, 1821, and discovered that almost the entire country supported the pro-independence army. The only holdouts were Mexico City, Veracruz and Acapulco. He remained in Veracruz instead of traveling to the capital and invited Colonel Antonio Lopez de Santa Ana of the pro-independence army to meet with him in Cordoba, Mexico. The meeting ended with the signing of the Treaty of Cordoba, which basically handed over the government to Iturbide, the leader of the rebels. While the Spaniards did not accept the independence movement and tried to defend Mexico City, Veracruz and Acapulco, they were unable to retain control of the areas. Both Mexico City and Acapulco were captured by the pro-independence armies and only Veracruz remained.

Ultimately, Viceroy O'Donoju met with the head of the pro-independence army, Iturbide. The viceroy declared the independence of Mexico on September 27, 1821 with the signing of the Act of Independence. This was followed in October 1821 by the Central American countries proclaiming that they were now part of Mexico. However, they soon separated from Mexico and only the state of

Chiapas in southern Mexico, remained part of the country.

Viceroy O'Donoju died almost a week later on October 8, 1821 of pleurisy. His remains were placed in the Cathedral of Mexico, Mexico City. With the independence of Mexico, Peru and the countries of Central America, the colonies of Spain were reduced to just the Philippines, Guam, Cuba, and Puerto Rico. After the independence of Mexico, the Philippines reported directly to Spain as the viceroyalty of New Spain was dissolved.

In South America, Ecuador declared its independence from Spain on August 10, 1809, but was not recognized by the Spanish government until February 16, 1840. Columbia became independent and drafted its own Constitution of Cucuta in 1821. Venezuela declared its independence on July 5, 1811, but was only recognized by Spain on March 30, 1845. Argentina declared independence on May 25, 1810, while Uruguay declared its independence on August 25, 1825. Bolivia, which had been part of Peru during the colonial period, declared its independence on August 6, 1825 and was recognized by Spain on July 21, 1847. Chile, which came under the jurisdiction of the viceroy in Peru, declared its independence on February 12, 1818 and was recognized by Spain on April 25, 1844. Peru declared its independence from Spain on July 28, 1821, but was not recognized by Spain until August 14, 1879. The only remaining country in Spain's colonies in South America, Paraguay became independent from Spain on September 10, 1880.

China Trade at the End of the Manila-Acapulco Galleon Trade Run

The manner in which Chinese trade was conducted in Manila changed after 1785. At that time, the newly established Royal Philippine Company affected the number of Chinese vessels which arrived in Manila to sell Oriental goods. Apparently, the Spaniards were attempting to reduce the number of Chinese who were involved in trade operations in the city. They wanted to take the retail trade businesses away from the Chinese who traditionally had a strangle hold on economy of the capital, and the cargoes which were shipped yearly to Acapulco on the galleons. This, in turn, would have created jobs in the retail trade for Spaniards, as the galleon trade by this time, was controlled by a small group of Spanish investors in Manila who were the main beneficiaries of the trade along with the Chinese investors. As a result, ordinary Spaniards who normally would have invested in the galleon trade in the past, were now, excluded from the process. In order to survive in Manila, they had to find other methods of employment and the likeliest way for them to achieve this would have been to become retailers.

In former times, as many as fifty trade junks arrived yearly in

Manila. They were overflowing with cargoes destined for the galleon trade run, but the Royal Philippine Company ended that practice. Instead, the Company owned its own ships which sailed directly to China to pick up cargoes for the Manila galleons. It was no longer necessary for Chinese vessels to transport their goods to Manila. Between the years of 1797 and 1812, the number of trade junks arriving in Manila was reduced to less than ten a year. By 1870, the junk trade to Manila ended as Spanish and foreign vessels brought Asian goods to the capital for sale there. As for the Chinese merchants of the mainland, they began selling their goods in other parts of Southeast Asia and particularly to Indonesia, where there was a growing Chinese community.

No doubt this had a direct impact on the number of Chinese who moved to the Philippines as migrants or those who remained in the colony. In the past, large numbers of Chinese went to Manila to live and work there in response to the thriving galleon trade. But the Chinese community of Manila was always under threat of expulsion by the Spanish government. Normally, they were sent into exile if they rebelled against the colonial government over some issue of contention. At other times, the Spaniards expelled the Chinese for other reasons. For example, in 1755, a massive number of Chinese were expelled from Manila in order to provide greater job opportunities for the Spaniards living in the city. Only about 10,000 Chinese remained in Manila. Those that were forced to leave the colony, moved to areas of the archipelago unoccupied by the Spaniards such as Mindanao and the Sulu Islands. Once there, they began setting up businesses and became involved in local trade in their new homes. After the British invasion of Manila and Cavite in 1762 to 1764, the Spanish government under Deputy Governor Simon de Anda also exiled many Chinese, as they had collaborated with the British. Many of the Chinese fled to Batavia (Jakarta) and settled there.

“In 1766, the expulsion of the Chinese from the Philippines was ordered by royal decree. Rigorous penalties were imposed on converted Christians who had committed crimes of disloyalty, apostasy and other serious offenses during the war. The decree had immediate effects on the Chinese and long term consequences on their role in Filipino society of those who remained. The 1768 Ordinances stated that true Christians were allowed to remain under the following rules: they were to register regularly; they would be assigned to various pueblos or districts for their residence; they were prohibited the possession and the use of weapons; they were to engage in agriculture, crafts and the mechanical trades, and they were not to leave their assigned pueblos without authorization, subject to

perpetual banishment from all Spanish dominions."[195]

As a result of all these events, by 1785 and the start of the Royal Philippine Company, there were far fewer Chinese living in the country than in previous years where as many as 40,000 (in 1749), were residing in the capital. In comparison to the reduction in the size of the Chinese community in Manila, the growing Mestizo population (people of mixed descent from Spanish, Chinese or Filipino parentage), increased and they became involved in commercial activities of the city.

One notable revolt against the Spanish colonial government took place in 1819. At that time, after many Chinese were slaughtered in the conflict, there were approximately 5,000 Chinese remaining in the colony. After the 1820s, the Spanish government once again began to encourage Chinese immigration to the country, as they realized that the Chinese would enable the country to grow economically. By 1886 there were 67,000 Chinese living in the Philippines and by 1898, this figure grew to 100,000.

Another change in the way trade was conducted in Manila in 1785 was the fact that foreign vessels were allowed to arrive in Manila Bay. However, they were only allowed to anchor in Manila Bay if they brought Asian cargoes to the capital for sale there. The restriction of not allowing foreign vessels, and particularly those of European countries to enter Manila Bay, was lifted.

In Manila, the Chinese Parian was demolished in 1790. The Chinese residents were allowed to move to other areas of the city and many settled in Tondo, Binondo and Santa Cruz. Meanwhile, the main center of trade where arriving Chinese traders were allowed to conduct their business was the "Alcaiceria de San Fernando" or silk market. The traders remained at the Alcaiceria on a temporary basis until they could return home the following year after their business was concluded in the city.

"Transient traders were housed in the Alcaiceria de San Fernando, a combined customs house, wholesale mart, and living compound, erected in Binondo in the late 1750s. Strict legislation attempted to keep them (the Chinese) separated from the resident Chinese. But in fact, from the 1790s onward Binondo became a great Chinese and Mestizo town in which permanently residing Chinese, Mestizos, and Indios rubbed shoulders with newcomers from China."[196]

Before the end of the galleon trade run, China was already involved in trade transactions with merchants in the United States. The commercial activities had begun from 1785 onwards. American trade vessels arrived in China from Salem, Massachusetts and New York to purchase Oriental goods which were transported to markets back home. When they embarked from the United States, they sailed

around South America's Cape Horn, and then north along the coast of South America to the port of Callao, Peru. From there they sailed across the Pacific to China. From 1848, during the time of the California "Gold Rush," many prospectors moved to the territory in order to mine ore. To cater to the needs of the prospectors, China provided a large quantity of exports to California which was transported there by American vessels.

The Legacy of the Manila-Acapulco Galleons

For two hundred and fifty years, the commercial activities of the galleons influenced every aspect of life in the Philippines. As it served as the main source of revenue for the Spaniards and Chinese who were involved in this trade, for them it had become a way of life. As the ship was prepared for the journey and departed once it was blessed by the priests from the Cathedral of Manila, to the moment when it arrived once again in the city laden with silver in payment of the goods sent to Acapulco the previous year, the ship came to dominate their lives.

As the Spaniards did not become involved in any other type of business or industry in the country, it was hard to imagine a life that was not so completely dependent on a ship's safe arrival in Acapulco, and then its return journey, with the funds which enabled many Spaniards in Manila to live in the lap of luxury for another year. But the ship was not just a money maker for those who invested in her cargoes.

She served as the mode of transportation between Spain and Mexico, transferring people of all walks of life and social classes to the shores of Manila Bay. Why they came to Manila in the first place was often questionable, but in the case of the priests and missionaries, they saw the voyage to the Philippines as way of serving God and converting the natives to Christianity. They believed that it was their religious duty and devotion to Christianity that led to the manner in which they led their lives. They made a pledge to God and hoped to redeem themselves in one way or the other. On the whole, the Church was highly successful in the Philippines, where close to ninety percent of the people became Christians.

The ship transported to the Philippines the customs and culture of the Spaniards. This entailed bringing to the archipelago a way of life that was foreign to the natives and included: a colonial system of governance; the enclosure of the city which was surrounded by defensive walls; the construction of numerous fortifications throughout the islands armed with weaponry such as cannons; the foods of Spain and Mexico which were introduced to the country including chocolate, coffee and avocados, and numerous Spanish words which became part of the Filipino language.

The galleon trade also influenced life in the Americas and particularly in Mexico. The introduction of the Oriental trade goods into the Americas were highly sought after by customers located there. For many purchasers of some trinket from the Orient, it may have been their first exposure to the exotic Eastern trade wares and Oriental culture and arts. The Asian exports influenced the arts of the Americas, as companies began reproducing replicas of the clothing, furnishings and artworks that arrived in Acapulco. The imitations were widely sought after and cheaply purchased. In Mexico, Filipino and Chinese mariners and merchants set up businesses in the country and remained there. Their descendants can still be found in the country especially in the towns along the west coast of Mexico.

In so many ways, the galleon trade facilitated the exchange of ideas between Spain and Mexico and conveyed these to the Philippines. Today, many of these same ideas and modes of life are reflected in every aspect of life in the country. But the galleon, as a sea vessel, was probably one of the most interesting aspects of the trade run. The ships were constructed mainly in Cavite by Spanish shipwrights and master carpenters. They followed Spanish regulations and measurements to ensure that the vessels were seaworthy. If the wood was sufficiently available and a Spanish shipwright was on hand, along with hundreds of workers to help construct the vessel, the galleon could have been built almost anywhere in the Philippines.

As treasure ships, the galleons brought the wealth of Asia to the Americas and in return it brought all that Spain and its colonies could offer to the Philippines. The riches of the Orient found new homes in the Americas, while the silver produced in the mines of Mexico and Peru allowed Chinese and Spanish investors to prosper. While it was the first transpacific commercial link of its kind in the world, it left a lasting impression in Spain and in its overseas possessions.

Annotated List of the Transpacific Galleons 1565-1815

The majority of the vessels which were in operation during the Manila-Acapulco trade run, from 1565 to 1815, managed to successfully complete the transpacific journey. Unfortunately, most of the available information about the vessels that are known is a result of the fact that they were shipwrecked, lost or involved in an incident of note. Of the vessels employed, 108 galleons were owned by the Spanish colonial government. Four of the galleons were captured by British pirates or privateers and these consisted of the *Santa Ana* in 1587; the *Encarnacion* in 1709; the *Nuestra Senora de la Covadonga* in 1743 and the *Nuestra Senora de la Santisima Trinidad* in 1762. Twenty-six vessels were lost due to either severe storms, fires on the ships, pilot error or the vessel's lack of seaworthiness as a result of poor construction. Another problem was the fact that the Spaniards had a tendency to overload the vessels with cargo in order to maximize their profits in Acapulco. As a result of the overloading, some vessels sank.

From 1565 to approximately 1600, as many as four galleons travelled in tandem from Manila to Acapulco. This ended when new regulations were established by the Spanish government in 1593, restricting the trade to two vessels per year – one from Acapulco and the other from Manila. Nevertheless, in some years, there were still several galleons sailing from Manila at the same time, although, the usual practice was the embarkation of the one solitary vessel.

The list below contains the vessels I have come across during my research of the galleons. Wherever possible, I have added a commentary where information was available. The list is by no means complete, but provides researchers with the information I was able to garner on the subject and which can be expanded in the future.

Galleons Sailing From Manila to Acapulco

1565 *San Pablo* - The ship sailed from the Philippines to Mexico and was under the command of Captain General Felipe de Salcedo, the grandson of the Spanish conquistador and conqueror of the Philippines in 1571 for the Spanish Crown, Miguel Lopez de Legazpi. As the galleon carried 50,000 pounds of Philippine grown cinnamon from the island of Mindanao, it was considered the first vessel to sail along the Manila-Acapulco trade route across the Pacific. The ship embarked from the island of Cebu, where Miguel Lopez de Legazpi

was initially based when he arrived in the Philippines in 1565. The vessel was piloted by the highly experienced navigator Fray Andres de Urdaneta, who was able to find the return route from the Philippines to Mexico, which from then on became the route used by future galleons. As the galleon sailed north after leaving the San Bernardino Strait, it headed towards Japan where it picked up the Kuroshio Current. This current allowed the vessel to pick up the North Pacific Current which propelled the ship towards the coast of California. When it reached California it followed a southern course to Acapulco. The *San Pablo* arrived in Mexico on October 8, 1565.

1568 *San Pablo* – Two years later, the *San Pablo* embarked from the Philippine island of Cebu but was shipwrecked in the Marianas.

1573 *San Juan* and the ***Espiritu Santo*** - The *San Juan* galleon sailed from Manila to Acapulco on July 21, 1573. The vessel was vexed by a number of difficulties. Initially, the ship had to remain at the port of Cavite as its foremast sail and rigging were damaged. After the vessel was repaired, it sailed to Acapulco from Cavite, but while it was still within the archipelago and sailing through the maze of islands between Cavite and the San Bernardino Strait, she was caught up in a severe storm. As a result, the ship was forced to seek shelter.

By October 8, 1573, the galleon's chief pilot, Pedro de Oliden, gave orders for the return of the vessel to Cavite. The ship, however, was instead anchored at the island of Mindoro and left there. The galleon was heavily damaged and in bad shape as its main mast had collapsed. The governor in Manila, Guido de Lavezares, sent carpenters with supplies and cables to repair the vessel and arranged to cut trees in Mindoro for a new mast. Once the vessel was repaired it was ordered to return to Cavite. Even though the vessel was obviously damaged, the governor was informed that the difficulties on the galleon were due to disputes amongst the captain, the master and the pilot and that these disagreements led to the failure of the voyage.

The governor suspended the master and the pilot for quarreling. When the vessel returned to Cavite, the governor ordered that the galleon undergo repairs so that it could sail in the following year in 1574 to Acapulco. The ship was sent out again, but she returned to Cavite for repairs and her keel was leaded. The vessel embarked once more, but it lacked sufficient rigging. The governor claimed at that time that he was unable to find additional rigging for the ship in Manila. He said that he wrote to the Spanish government in Mexico City for additional supplies of rigging, but no action was taken by the viceroy's office on the matter. One of the reports about this particular ship, which was sent to the king, was prepared by the accountants in Manila, Andres Cauchela and Salvador de Aldave. According to them, the *San Juan* sailed on July 19, 1574 to Acapulco in the company of

the *Espirtu Santo*.

1576 ***Espiritu Santo*** - The galleon sailed to Acapulco from Cavite but was wrecked in the area of Catanduanes, Philippines. It was said that the pilot's negligence led to the disaster. He was unable to locate the San Bernardino Strait. In the book entitled, The Philippines Under Spain, a compilation and translation of original documents from the Archivo de las Indias in Seville, a document dating from May 30, 1576, mentions the loss of the galleon. The document stated that, "The ship *Espiritu Santo* was on its way back (to Acapulco) according to some letters found from Father Fray Diego de Herrera. It was lost in an islet near this island (of Luzon) where we are because of a storm. This resulted in much hardships and sorrow because now only a few men are left in the camp with very little ammunition. Last year because not even a pound of lead was ordered it was not brought and so now we are in great trouble for in this land all is transacted with gunpowder and lead and one cannot walk even for half a league of ground without ammunition. This summer we suspect that they might come from the Continent (from China) to afflict us with more trouble, may Heaven help us. The ship *Espiritu Santo* was a great loss to us and we are at the mercy of God. These are the reasons why, if it be Your Majesty's will, the following should be sent at once: men, large cannons and ammunitions and skilled cannon makers, builders of galleys and riggings and other equipment for them for all are needed. "

1577 ***San Juan*** - The galleon sailed from Cavite on June 12, 1577 and arrived in Acapulco on November 22, 1577. The voyage took less than six months to reach Mexico which was highly unusual.

1578 ***San Juanillo*** - The vessel was under the command of Captain General Juan de Ribera. It had a carrying capacity of 300 tons and carried a cargo of Oriental goods valued at 750,000 pesos, as well as gold valued at 150,000 pesos. The ship sailed through the San Bernardino Strait and disappeared.

1582 ***Santa Ana*** – The galleon sailed to Acapulco from Cavite but was captured by enemy vessels.

1583 ***San Martin*** - According to Father Horacio de la Costa's book "Jesuits in the Philippines," the ship was commanded by Captain General Francisco de Mercado. He claimed that the ship encountered rough weather and was blown off course. It wound up in China and eventually sailed to Macau.

1586 ***San Martin*** – Reference has been made of this vessel in a biographical study of Fray Andres de Urdaneta by Jose Ramon de Miguel. The book is entitled "Urdaneta and His Times." The quote is as follows, "At the start the Manila galleon trade was absolutely liberalized but soon royal decrees began to regulate it on the excuse

that all trade should be for royal interests. With the passing of time, shipments became monopolized by a limited number of persons. In 1586, the galleon *San Martin* carried shipments for 194 different persons. Two hundred years later the cargo of the *San Andres* pertained to only 28. A decree was issued in 1598 prohibiting royal officials from engaging in commercial trading, but in countless cases the order was not obeyed so these officials became very rich. ”

1587 ***Santa Anna*** – The galleon was captured by the Englishman, Sir Thomas Cavendish off the coast of Baja California on November 4, 1587. Cavendish was sailing through the area aboard his flagship the *Desire* (120 tons), with 48 men and 18 guns and the *Content* (60 tons). Another vessel in his fleet, the *Hugh Gallant*, had been set on fire as he had so few remaining men to sail the vessel. The galleon, which had a carrying capacity of 700 tons, was captured at the bay of Aguada Segura or Puerto Seguro, Baja California as it sailed towards Acapulco. It was commanded by Captain General Tomas de Arzola. It was not able to put up much of a fight against the English vessels, as they did not have their weapons readily available. Nevertheless, the battle between the Englishmen and the Spaniards lasted for six hours.

During the confrontation, the Spaniards resorted to throwing stones at the Englishmen in an attempt to protect their ship. Captain General Alzola eventually surrendered to the Englishmen. The Spaniards were put on shore and provided with provisions, weapons and other equipment to protect themselves against Indians, until they could be rescued. After the Englishmen sailed away from the area, the Spaniards were able to extinguish the galleon’s fire and repaired the vessel. They then sailed the galleon to Acapulco where they arrived without any further incidence.

Cavendish seized 2 million pesos from the ship including 658,000 pounds of pure gold mined in the Philippines. He also helped himself to 40 tons of cargo and transferred the merchandise to his own vessels. The rest of the cargo, which consisted of mainly Chinese silks, was thrown overboard. When he returned to London, he sailed along the Thames. His vessel was quite a spectacle as he had decorated the ship in silk fabrics which had been hung from the rigging.

1588 ***Santiago*** – The vessel was constructed at the shipyard of Arevalo on the southern coast of the island of Panay, Philippines. When Thomas Cavendish was in this area, as he was returning to England after attacking the *Santa Ana* off the coast of Baja California, he sent a small landing party to burn the *Santiago*. But the Spaniards defended themselves against the Englishmen who returned to their vessel the *Desire*. The galleon was able to complete its journey to Acapulco after having embarked from the Philippines in June 1588.

1589 Two galleons sank at the port of Cavite. They had been

partially loaded with cargo for the journey to Acapulco when they sank. They were probably overloaded or may have had structural damage. Their names are unknown.

1595 ***San Felipe*** – The galleon sailed from Cavite to Acapulco, but it was wrecked off the coast of Japan. There were a few survivors who managed to reach Japan.

1595 ***San Agustin, Margarita, and Felipe*** - The *San Agustin* was shipwrecked north of San Francisco, California in Drake's Bay. The *San Agustin* was one of four galleons traveling from Manila to Acapulco that year. The ship was under the command of Captain General Sebastian Cermeno. One of its objectives, as it headed to Mexico, was to chart the Alta California coast and find areas that could serve as possible safe harbors for future incoming galleons. Finding suitable stopping off points was a primary concern of the Mexican government at the time, as the galleons normally arrived off the coasts of California in need of fresh water and provisions, before continuing the journey to Acapulco. The ports would also serve as a refuge for the galleons in case there were pirates in the area or if the weather was stormy. The other ships in the fleet were the *Margarita*, the *Felipe* and a small launch. The vessels continued on to Acapulco, where they arrived safely.

As the *San Agustin* searched for a possible safe harbor, where it could anchor, the pilots aboard the ship were unaware that the coast was littered with small islands, sand banks, and rocks and beset by foggy weather. They anchored in an area they thought was safe, but a sudden storm released the vessel from its anchorage. The waves and wind sent the vessel onto a sandy area where it toppled over and broke up as the waves pounded the ship. Nevertheless, Captain General Cermeno managed to survive the wreck along with other crew members. They used the small launch they had brought with them – filling it with supplies they had salvaged and managed to arrive in Mexico.

In 1602, the Spanish explorer Sebastian Vizcaino, who was based in Mexico City, tried to find the remains of the *San Agustin*, but he was unsuccessful. The ship carried an estimated 130 tons of cargo which was mostly composed of silks and other fabrics, porcelains, spices and Oriental goods. Although, there have been many attempts to organize a modern archaeological search and excavation of the site where the vessel was shipwrecked, these attempts faltered for one reason or the other. The treasure hunter Robert Marx was able to locate the ship in the 1980s, and even uncovered some artifacts from the site, but was unable to receive government approval in California to explore and salvage the galleon. The *San Agustin* still remains somewhere at the bottom of Drake's Bay, still awaiting discovery.

1596 *San Felipe* – The galleon was on its way to Acapulco when it encountered a typhoon and was thrown off course. The ship had embarked from Cavite in July of that year, and it was stranded in Urado at the port of Tosa Province, Japan on October 19, 1596. The ship was carrying a cargo valued at more than 1.5 million silver pesos. Aboard the vessel was Bishop Pedro Martins, who was later able to testify in Manila of the events which took place on the ship and led to its being confiscated by the Japanese. Initially, as the vessel was in such bad shape as a result of the storm, the chief pilot Francisco de Olandia, urged the captain general that the vessel should anchor at the port of Nagasaki. But Captain General, Matias de Landecho, ignored him. Instead, he listened to the advice Fray Juan Pobre, who was on board the vessel and assured him that as the Japanese were friendly to the Franciscans in Kyoto, they would be welcomed in Tosa. Obviously, the decision to remain there was a major error on the part of the commander as he faced the unapproachable local daimyo who was not at all hospitable.

The ship was eventually towed by Japanese boats into the port, but in the process the galleon was wrecked on a sand bank causing damage to her keel. The crew and passengers managed to safely disembark from the ship, but the cargo was removed by samurai working for the local daimyo and transported to nearby warehouses. In a bit to receive assistance and have the cargo returned to them, the captain general sent his representatives to Taiku Hideyoshi's court. Hideyoshi (1536-1598), was then the ruler of Japan. At that time, he was involved in conquering the Korean peninsula, as well as tackling with the aftereffects of several severe earthquakes which caused much suffering in Japan. The war and the natural disasters had used up much of his finances, and he was interested in shoring up his funds. When the galleon arrived in Tosa, he realized that the galleon's cargo could provide him with a much needed source of income.

Hideyoshi was still deliberating about whether or not to confiscate the ship and its cargo, as he was interested in maintaining trade ties with the Spaniards of the Philippines. But he changed his mind after hearing a distressing story from members of his court who recounted what they were told by the chief pilot of the galleon. Apparently, Francisco de Olandia met with them and in a bit to intimate the Japanese, he boasted of Spain's might. He showed Hideyoshi's representatives a world map indicating all of Spain's possessions, and when asked how the Spaniards acquired all the territories, Olandia replied that the Spaniards first sent in missionaries to pacify the people and they were followed by the military. After hearing this story, Hideyoshi was incensed and accused the Christians in Japan of being traitors. At that point, he decided to confiscate the ship and its

cargo, but much worse was to come.

This incident also led to the death of Franciscan friars in Nagasaki who were crucified on crosses by the Japanese. The Japanese rulers had long suspected the motives of the Christian missionaries operating in their country, and now that they heard this story of how the Spaniards were able to conquer countries, it led to a bloodbath in Japan. The Jesuits remained untouched by Hideyoshi, as they were instrumental intermediaries in the Macau-Japan trade based in both Nagasaki and Macau. Even though, three Jesuits were executed by the Japanese and perhaps this was in violation of Hideyoshi's condemnation of the Christian missionaries. In the end, twenty-six missionaries were executed in Nagasaki on February 5, 1597. Additionally, seventeen Japanese Christians who were the servants of the Franciscans were also executed. One hundred and thirty seven Christian churches were closed in Kyushu, as well as the houses and seminaries of the clergy. Many Christians fled from Japan at this time, ostensibly traveling to Macau on Portuguese trade vessels. Included within this group of travelers were, no doubt, the survivors of the *San Felipe* galleon who returned to Manila the following May via Macau.

1599 ***San Tomas*** – The galleon was prepared to sail from Cavite to Acapulco. Dr. Antonio de Morga wrote of this galleon in his book published in Mexico in 1609. The book is entitled "Sucesos de las Islas Filipinas."

1600 ***San Pablo*** – This galleon was shipwrecked along the Marianas (Ladrones Islands) as it sailed from the Philippines to Mexico.

1600 ***San Diego*** – The warship galleon, which has also been referred to as a merchant patache for inter-island shipping in the Philippines, never travelled on the Manila galleon run to Acapulco. It has been included here as it was the only warship galleon which was fully excavated in the Philippines. The galleon was constructed in Cebu and was ten years old when it was used to repel a Dutch blockade of Manila Bay on December 14, 1600. During the battle against the Dutch, the galleon sank quickly. It was never determined what actually caused its demise. The ship's hull may have sustained damage during the battle or the mere fact that the ship was top heavy and overloaded may have also caused the sinking. It was later excavated by underwater archaeologists in 1993. A multitude of artifacts were uncovered at the wreck site and they are now housed at the National Museum of the Philippines in Manila.

1600 ***San Geronimo*** – The galleon sailed from Cavite to Acapulco, but was shipwrecked by a severe typhoon on the rocky coasts of Catanduanes, Philippines.

1600 ***Santa Margarita*** – The galleon sailed from Cavite to Acapulco, but was shipwrecked in the Marianas. This ship may also be

the vessel which has been referred to in various Filipino history books as the "*Capitana*," but this has not been confirmed. It was a vessel, which in some records, was listed as having disappeared as it traveled from the Philippines to Mexico. Two years after the disaster, another galleon the *Jesus Maria*, which sailed from Acapulco to Guam, and then to Cavite, was able to rescue 260 survivors of the *Santa Margarita* shipwreck and transported them to Manila.

1601 ***San Tomas*** – This galleon sailed from Cavite and carried 2.5 million dollars worth of cargo. As it sailed to Acapulco, it was shipwrecked off of Catanduanes, Philippines. The ship's crew survived and managed to salvage most of the cargo although some silver was lost.

1602 ***Espiritu Santo*** - The galleon was constructed in the Cavite shipyard by Juan Tello de Aguirre. It was caught up in a storm as it approached the port of Hirado, Japan and had to take shelter there as her main mast was blown overboard. She was towed up a channel by Japanese boats and was moored in the harbor. Japanese guards were posted at the mooring sight to prevent the crew or passengers from going on shore. As the ship sat in the port, armed Japanese from the countryside began to flood into the city demanding that they be given parts of the ship i.e., some wanted her sails and her cargo.

But the galleon's highly experienced Captain General, Lope de Ulloa, was determined to keep his ship intact. However, many of the Japanese tried to board the ship to remove her cargo, but the captain was able to prevent them from confiscating the merchandise. Even though the ship was guarded by Japanese guards, twenty Spaniards were able to go on shore. They were discovered by the Japanese and captured. From then on, the captain prevented anyone else from leaving the ship and going on land. He sent his brother Alonso de Ulloa and Alonso de Maldonado to Taiku Iyeyasu for assistance with the dilemma they faced at the port, and were successful in receiving his assurances that they would be assisted. However, it appears that Captain Ulloa was doubtful whether this would be the case, and he decided instead to make a run for the open sea.

With just a foresail and a sprit sail in position, he headed for the open sea from the port. Meanwhile, the Japanese had earlier stretched a heavy rope across the entrance into the port and amassed a fleet of small boats which were used to block the ship from leaving the port. The Japanese fired on the galleon from the hills around the area and from the smaller boats, while the Spaniards fired back and also towards the blocking boats. Captain Ulloa offered a Black slave on the ship his freedom in return for cutting the rope with a machete and freeing the ship and himself from a lifetime of servitude. The Black slave was able to cut the rope and the ship moved forward smashing

into many of the small boats blocking its way forward as it made its getaway to the open sea. The ship returned to the Philippines, after a journey of twelve days.

1603 ***San Antonio*** – The galleon sailed from Cavite and carried many Spanish dignitaries from Manila who were returning to Mexico. They were fleeing from the capital as they faced many difficulties living there. It is presumed that this particular ship carried a great fortune in cargo and other valuables. The ship disappeared on its journey somewhere in the Pacific. Four galleons sailed to Acapulco from Manila in that year of which the *San Antonio* was one of the vessels in the fleet.

1608 ***San Francisco*** and the ***Buenaventura*** – galleon sailed from Cavite to Acapulco and was shipwrecked off Japan. A survivor was Rodrigo de Vivero who was returning to Mexico. While he was in Japan, he made notes on Japanese life and culture. At the time, an English sailor who was in Japan by the name of William Adams was able to help the Spaniards to build another vessel which they named the *Buenaventura*. On that ship they sailed to Acapulco apparently some time after, as it would have taken a while to build another vessel.

1616 ***Santisima Trinidad*** – The galleon sailed from Manila to Acapulco with a valuable cargo worth three million pesos. It was caught up in a typhoon at sea and was wrecked off of Cape Satano in southern Japan.

1617 ***Salvador***, ***Espiritu Santo***, ***San Felipe***, ***Santiago***, ***San Juan Bautista***, ***San Miguel***, ***Nuestra Senora de Guadalupe*** – According to Captain Sebastian de Pineda, in a letter he wrote to the Council of Indies in 1619, he described the galleons, which he said were at the port of Cavite in 1617. The galleons he described are those mentioned above. In addition, there was a nao (ship) built in India, which was purchased by the Spaniards and was in that year also anchored at Cavite the *San Laurencio*.

1618 ***San Diego*** – The galleon was making its way from Cavite to the San Bernardino Strait, but found that the area was blockaded by the Dutch. She returned to Manila Bay.

1620 ***San Diego*** – The galleon was on its way to Acapulco from Manila when it was attacked by three Dutch ships near the island of Mindoro in the Philippines. The galleon retreated to Manila Bay where the galleons the *Rosario* and the *Encarnacion* came to her defense. The three Dutch ships retreated after a ten hour battle with the Spanish galleons. Two years earlier the *San Diego* had returned to Manila Bay after finding that the San Bernardino Strait was blockaded by the Dutch.

1621 ***Nuestra Senora de Vida*** – When the galleon sailed to the San

Bernardino Strait she was shipwrecked. The pilot of the vessel was unable to guide the ship through the many islands of the Philippines to the open sea. As it neared Isla Verde, which is located near the island of Mindoro, it crashed onto the reef. The waves were so strong that the vessel had to be abandoned. The passengers of the ship were so angry that they executed the chief pilot by hanging him on the shore.

1631 ***Santa Maria de Magdalena*** – As this galleon sailed from Cavite to Acapulco, it capsized as it appeared to be unseaworthy. The shipwrights tried repairing the vessel, but it continued to list to one side. When the ship embarked from the port, the panicked passengers began jumping into the bay fearing that it was about to sink. Fourteen passengers drowned and the cargo was lost.

1637 No galleons made the journey to Acapulco in this year.

1638 ***Nuestra Senora de la Concepcion*** - The vessel sailed from Cavite to Acapulco when it was destroyed by a severe storm in the Marianas on September 20, 1638. She had a 2,000 ton carrying capacity with a draft of 18 to 22 feet and measured approximately 140 to 160 feet in length. When she was wrecked she had a cargo valued at four million dollars. Documents indicate that a portion of the ship's cargo was illegal and the property of the Governor of the Philippines, Sebastian Hurtado de Corcuera. He apparently was in the habit of shipping unregistered cargo in the galleons which included gifts he had received as bribes and consisted of items such as jewelry and gold. He received the bribes in Manila in exchange for favors or appointments he granted to individuals in the capital. In addition to the governor's property, the galleon carried other cargo composed of valuable silks, cotton from India, camphor from Borneo, spices from the Spice Islands, ivory from Cambodia, gems from Burma and Thailand – all from China or other Asian countries and these were destined to be sold in Acapulco, Mexico City or transported via Veracruz to Havana and then Spain. One of the precious items contained in the galleon's cargo was a set of solid gold plates and a ewer which was a gift to the emperor in Japan from the king of Spain. Apparently, the governor retained the gift for his own use and shipped the items on the galleon as part of his own property. Four hundred people perished during the shipwreck with a few survivors. The galleon was discovered by William Mathers in 1987 and salvaged during which priceless artifacts were uncovered including Ming dynasty porcelains.

Commanding the ship was the governor's nephew, Juan Francisco. He was little experienced in military matters or in naval operations and should not have been placed in charge of the galleon, but he was given the appointment by the governor in order to protect the

governor's personal cargo on the ship. Juan Francisco was a young man of 24 years of age and was totally out of his depth when it came to commanding a galleon. Later, after the loss of the galleon, the governor was prosecuted for shipping personal undeclared items on the vessels sailing from Manila to Mexico, as well as appointing his nephew to command the ill-fated galleon.

1641 ***Nuestra Senora de Aguda*** – The galleon was stranded at Catalina Island.

1646 ***Encarnacion*** and the ***Rosario*** – The two galleons fought against Dutch vessels near Mariveles, Manila Bay in 1646. The Dutch arrived in the bay with four ships and the two galleons were prepared to intercept the enemy vessels. Both galleons were so heavily armed with many cannons, cannonballs and ammunition that the Dutch were unable to compete against them. The battle lasted for five hours and in the night the Dutch sailed away. The commander in charge of the two galleons during the battle against the Dutch was Captain General Lorenzo de Orella y Ugalde, a Biscayan who was highly experienced in military and naval matters. After the Dutch retreated from Manila Bay, the two galleons were ordered to sail to the San Bernardino Strait and wait there for the incoming galleon from Acapulco which was the *San Luis*. The *San Luis*, which was commanded by Captain General Fernando Lopez Perona, arrived in the Philippines, but it was stranded along the coast of Cagayan. All of the ship's crew was saved as well as its cargo and silver.

In the following year 1647, the Dutch were back in the Philippines harassing Spanish vessels. This time, however, the Dutch fleet was very large and consisted of twelve vessels. They attacked the fortress in Cavite, but as the *San Diego* galleon was then in the port along with several other vessels, they were able to repel the Dutch assault. During the battle the Spaniards sank the Dutch flagship.

1648 ***Buen Jesus*** – The galleon was destroyed by fire in Lampon, Philippines. The Spanish commander of the vessel was afraid that the galleon could be attacked and captured by Dutch vessels which were lurking in the region. As a result, the commander of the ship purposely set fire to her. The galleon's passengers, crew and cargo were transferred to land, before it was burned. One of the passengers on the vessel was Fray Domingo Fernandez Navarrete (his rendition of the voyage has been provided in Chapter 15).

1653 ***San Francisco Javier*** – The galleon was shipwrecked in the Philippines. Aboard the vessel was General Lorenzo de Ugalde.

1654 ***San Diego*** – The galleon sank in Manila Bay, but the cargo was salvaged and there was no loss of life.

1666 ***Nuestra Senora del Buen Socorro*** – The ship sailed to Acapulco from Manila. It was considered the largest galleon

constructed at that particular time in the history of shipbuilding in the Philippines. It was built at the island of Bagatao shipyard in Sorsogon. The shipwrights designed the vessel with two enormous water tanks, which provided everyone on the ship with enough water for the entire journey to Acapulco, as well as for the return voyage.

1668 ***San Diego*** – The galleon sailed from Manila with Fray Diego Luis de San Victores on board.

1668 ***Santa Maria de los Valles*** – The galleon embarked from Cavite to Acapulco with 778 people on board the vessel. The ship was a 1,500 ton galleon and carried a valuable cargo of Oriental goods. She arrived in Acapulco two days before Christmas Day. A few hours later, she suddenly caught fire and sank within an hour taking all of her cargo to the bottom of the sea with her. At the time, the cargo had an estimated value of three million pesos. Many of the crew members and passengers also perished in the fire.

1670 ***San Jose*** - The galleon was commanded by a Peruvian geographer and student of nautical matters, Andres de Medina. He was convinced that there was a shorter, more secure route that the galleons could follow from Cavite to Acapulco across the Pacific. While he was in command of the *San Jose*, he was determined to find the new route, but the former Governor of the Philippines Diego Salcedo, who was traveling on the ship, removed Medina from his post when he learned of the commander's plans to alter the ship's course. Governor Salcedo was on his way to Mexico where he was expected to be tried by the Holy Inquisition for charges of heresy and crimes against the church. Governor Salcedo, a native of Belgium, was known as strong minded individual who tried to change how the Manila galleons were managed. He also had strong views against the church and these opinions led to his downfall in Manila.

The vessel may also have been the strange galleon that was discovered off the coast of Mexico by the Spaniards of Acapulco. When they boarded the ship, they found that all of the crew members and passengers on the ship were dead. No one could discover the cause of the deaths, but it was thought that they had all died of starvation.

1674 ***Santa Rosa de Lima*** – The galleon sailed from Manila to Acapulco.

1675 A galleon sailed this year and was caught up in a storm which led to sixteen casualties. The name of the galleon is unavailable.

1676 A galleon sailed and was also caught up in a severe storm. As a result, thirty-six men were swept overboard by a single wave.

1679 ***San Antonio de Padua*** – The galleon sailed from Manila to Acapulco and was last sighted off the coast of Baja California. It is not clear if it actually arrived in Acapulco.

1689 ***Santa Rosa de Lima*** – The galleon arrived safely in Manila.

1690 ***Rosario*** - The galleon sailed from Cavite to Acapulco. On board the vessel was the former Governor of the Philippines, Juan de Vargas y Hurtado, who served in that position from September 28, 1678 to August 24, 1684. As a passenger on the galleon, he had no idea that the voyage would be his last journey. The outgoing galleons from Manila to Acapulco normally did not stop in Guam (the Marianas). It was only on the return journey from Acapulco to Manila that the galleon made a scheduled stopover in Guam to deliver cargo, equipment, supplies, government officials, missionaries and soldiers to the Spanish colony in the Marianas. When leaving the Philippines, the galleons normally sailed north from the San Bernardino Strait in order to pick up the Kuroshio Current and then the North Pacific Current towards California. The fact that the galleon was in the area of the Marianas clearly indicates that the ship was off course. In any case, the vessel was lost and with it the governor perished along with everyone else on the galleon.

1693 ***Santo Cristo de Burgos*** – The galleon sailed from Cavite and then disappeared as it traveled across the Pacific to Acapulco. It was later discovered that the vessel was destroyed by fire. Only six men survived the disaster. They had a small boat which they used to reach land, but during the journey they ran out of food and turned to cannibalism. The men ate the youngest member of the crew, who they later claimed had offered to sacrifice his life so that they might survive, or so the story went. How true their side of the story was, remains a mystery, but that was the story the survivors later related to Spanish officials. It was possible that the young man was murdered. The survivors reached Lamon Bay and described their horrific experiences at sea. Later on, pieces of the burned vessel turned up on the shores of the islands in the Marianas. The ship had a cargo worth millions of dollars. How the fire began on the ship also remains a mystery.

1694 ***San Jose*** (aka ***Saint Joseph***) – The galleon is also known in historical records as the *Saint Joseph*. The galleon was constructed in Cavite in 1693, and it was completed nine months later. The shipyard employees labored around the clock and at an amazing speed in order to complete the construction process. As they worked on the ship during religious days and on holidays, this infuriated the members of the clergy in Cavite and Manila. When the galleon was shipwrecked, the church officials said that the disaster was divine punishment for disregarding the holy days during the construction of the vessel. As the ship sailed to Acapulco from Cavite, she crashed into rocks along Lubang Island near the island of Mindoro on the night of July 3, 1694. All of the 400 individuals on the ship died and the 12,000 pieces of

cargo she carried were lost. It has not been confirmed, but there is mention that the actual shipwreck site was not Mindoro, but Manila Bay and that it was excavated in 1985 by underwater archaeologists.

1696 ***San Jose*** – The galleon set sail from Cavite on Friday, June 29, 1696 and arrived in Acapulco on January 19, 1697. We know about the journey of this galleon through the writings of a passenger on the ship, Giovanni Francesco Gemelli Careri, an Italian lawyer who was a world traveler and came to the Philippines where he spent more than one month seeing the country and writing of his experiences in the archipelago. The captain of the ship was Emmanuel Arguelles.

1697 ***San Francisco Xavier*** – The galleon sailed from Manila and arrived safely in Acapulco.

1699 ***San Francisco Xavier*** – The ship sailed from Cavite to Acapulco and arrived safely. The ship was commanded by Captain General Miguel Martinez and her Chief Pilot was Miguel de Lorrenga.

1701 ***San Francisco Xavier*** – The vessel sailed from Cavite to Acapulco and arrived safely. She was commanded by Captain General Bernardo de Endaia and her Chief Pilot was Miguel de Lorrenga.

1704 ***Nuestra Senora del Rosario y San Vicente Ferrer*** – The galleon sailed from Manila to Acapulco. On the morning of December 4, 1704, the privateer, William Dampier, spotted the galleon as she passed the area of Colima, Mexico on her way to Acapulco. The galleon was surprised by the presence of the British vessels and was struck by several broadsides from the 5 pounder guns of the British ship the *St. George* before she was able to retaliate. This ship was another very large galleon and it was able to hold its own against the enemy vessels. The Spaniards prepared their 18 and 34 pounder guns – shooting at the *St. George* which was already in a terrible state and in danger of sinking. Dampier decided to take his ship out of range of the *Rosario*. Consequently, the galleon was able to safely sail away from the British vessels and arrived in Acapulco. The captain of the galleon was Juan Bautista de Zavala.

1704 ***San Francisco Xavier*** – A shipwreck was discovered near Nehalem, Oregon which may have been the *San Francisco Xavier* galleon. The ship that was wrecked in Oregon has become known as the Beeswax Shipwreck. The wrecked ship carried a large quantity of beeswax in her cargo hold. The *San Francisco Xavier* was used continuously on the galleon run. During the August 1704 voyage she was under the command of Captain General Santiago Zalbaburu.

When the San Francisco Xavier disappeared, she was carrying 75 tons of beeswax, which was one of the distinguishing features of the shipwreck in Oregon. The galleon sailed to Acapulco from Cavite, but failed to arrive in Mexico. After her disappearance no information about the vessel was known in Mexico or in the Philippines about her.

The main artifacts found in the vicinity of the shipwreck site have been pieces of beeswax which have periodically washed up on the shores of Oregon's Nehalem Bay. Some bits of Chinese porcelain and wood from the vessel have also been found. As of 2009, underwater archaeologists have not been able to locate the exact shipwreck site.

1706 ***Rosario*** – The ship sailed from Cavite on July 6, 1706 to Acapulco. She cleared the San Bernardino Strait on August 3, 1706 and passed the Marianas on September 29. She began seeing the first signs that she was nearing the coast of California on November 16. She passed Capo San Lucas in Baja California by December 4 and arrived in Acapulco on December 20, 1706. The journey from the San Bernardino Strait to Acapulco took five months and fourteen days to complete.

1709 ***Nuestra Senora de la Encarnacion y Desengano*** – The galleon was sailing from Manila to Acapulco when it was captured by the Englishman Captain Woodes Rogers off the coast of Puerto Seguro near Cape San Lucas, Baja California. She was intercepted by the British on December 22, 1709. On board the ship and advising the captain was William Dampier – the well known navigator, privateer and pirate. Rogers' ships included the *Duke, Duchess* and *Marques*. The galleon's commander was Captain General Jean Presberty, who was formerly a factor for a French trading post in Canton. Rogers learned from the prisoners he had captured on the vessel that there was another galleon on its way to Acapulco from Manila the *Begona*. Rogers hoped to capture this galleon as well. The two galleons were apparently sailing together and embarked from Cavite at the same time.

1709 ***Begona*** – The galleon sailed from Manila to Acapulco accompanying the *Nuestra Senora de la Encarnacion y Desengano*. Woodes Rogers discovered the galleon on Christmas Day, December 25, 1709 making its way to Acapulco. The galleon was a 900 ton ship, with at least 60 guns of which 40 were mounted and ready to fire at the English ships of the *Duke*, *Duchess* and the *Marques*. The pilot for the English vessels was William Dampier. The galleon carried passengers and a crew of 150 men. The ship was on its maiden voyage from the Philippines to Mexico when it was spotted by the English near Baja California and attacked. The Spaniards on the galleon were able to fight off the English whose ships were already in a deteriorating state and were no match against the strength of the formidable galleon. The commander of the *Begona* was Captain General Fernando de Angulo. It was eventually able to arrive safe and sound in Acapulco.

1722 ***Sacra Familias***

1726 ***Santo Cristo de Burgos*** – The ship sailed from Manila to

Acapulco. The crew of the *Santo Cristo* consisted of 252 sailors, as well as the ship's master, three pilots, boatswain and other officers. The *Santo Cristo* was traveling with a small galley when it was lost during a storm. A study of the shipwreck has been extensively carried out by Francisco Mallari. In his published work, "*The Wreck of the Santo Cristo de Burgos and the Trial of its Officers*," Mallari wrote that the vessel, the capitana, had departed from Cavite on July 8, 1726. The 500 ton fully laden vessel with a valuable cargo and an unspecified number of passengers was commanded by Captain General of the Sea, Francisco Sanchez de Tagle.

After the ship arrived in Acapulco, it was expected to return to Manila bringing with it the much needed subsidy for the colony's yearly expenses. However, as the galleon was making its way to the San Bernardino Strait and leaving the Philippine islands for the Pacific, it was caught up in a severe storm on the night of July 23, 1726. The vessel was wrecked off the coast of Ticao, which was one of the islands where galleons normally stopped to take on fresh water and provisions before passing through the strait. The ship's master of the galley died during the storm.

1735 ***San Cristobal*** – The galleon sailed from Cavite to Acapulco. This may have been the same vessel that reached the coast of California and anchored at Magdalena Bay where the Jesuits had a mission. The Jesuits were able to help the starving crew members on the galleon and revived them with fresh foods.

1731 ***Nuestra Senora de la Covadonga*** and the ***San Cristobal*** – The two galleons sailed from Manila and arrived in Acapulco.

1733 Two galleons crossed the Pacific from Manila to Mexico.

1734 ***Santa Maria Magdalena*** - Not all of the galleons were able to cross the Pacific to Mexico. A few were found unseaworthy to complete the journey and others sank soon after the construction process was completed. In the case of the *Santa Maria Magdalena*, the galleon was so overloaded with cargo that she sank soon after sailing from Cavite. She carried a great number of jars filled with provisions. The jars were originally from Southern China, Vietnam (Cochin China) and Siam (Thailand). They were filled with fresh water for the journey across the Pacific. Unlike the galleons in the Atlantic fleet which used casks to store water, in the Philippines it was standard practice to carry as many as 1,000 to 2,000 large Asian jars filled with water for the voyage. As water was used up, the jars were refilled with sea water and placed in the hold to maintain the ship's integrity as they served as ballast for the vessel.

1735 ***Encarnacion*** – The ship sailed from Manila to Acapulco and stopped at the Jesuit mission in California before going on to Mexico.

1737 ***Nuestra Senora de la Guia*** – The ship sailed from Manila to

Acapulco.

1741 ***Nuestra Senora de la Guia*** – The galleon sailed from Manila to Mexico and disappeared.

1742 ***Nuestra Senora del Pilar de Zaragoza*** - The ship sailed from Manila to Acapulco. The ship arrived in Acapulco even though Commodore George Anson was cruising near the port city and hoping to capture the galleon. When he arrived in Acapulco with his vessels in February 1742, he learned that the galleon had already arrived on January 9, 1742. He waited for the outgoing galleon, but it was delayed by government officials who knew that Anson was still in the area. Instead of waiting in Acapulco, Commodore Anson headed to Macau and China and captured the *Nuestra Senora de la Covadonga* in the Philippines in 1743.

1743 ***Rosario*** – The Spaniards in Manila prepared the galleon for its journey to Acapulco. By this time, they were still unaware of the fate of the *Nuestra Senora de la Covadonga* and that she had been captured by Commodore Anson. The *Pilar* which was sent from Manila to meet the *Covadonga* and guide her to Cavite was not captured by the English vessels. The Rosario had a carrying capacity of 1,710 tons. She had enough room in her cargo hold for as many as 18,667 pieces of cargo. The length of her keel was 156 feet and her overall length was 188 feet while she was 56 feet in the beam and her depth of hold was 26 feet.

1747 ***Santo Domingo***

1750 ***Nuestra Senora del Pilar de Zaragoza*** – The galleon sailed from Cavite to Acapulco. The ship was under the command of Captain Ignacio Martinez de Faura. As it sailed, a leak was soon discovered in the ship's rotting hull and this evidently led to its sinking. When the vessel embarked from Cavite, the passengers complained to the captain about the vessel's poor condition and begged him to return to the port, but he ignored their pleas. The ship sank not far from Manila Bay with wreckage of the vessel, bodies of the dead and cargo washing up along the shores of Luzon.

1752 ***Nuestra Senora de la Santisima Trinidad*** – The ship sailed from Cavite to Acapulco on April 29, 1752 and arrived there safe and sound. A copy of the ship's register for this vessel is currently in the possession of the Mexican National Archives in Mexico City.

1753 ***San Sebastian*** – The ship sailed from the Philippines to Mexico and was captured by George Compton near the coast of San Clemente Island. In this year, two foreign pilots, a Frenchman and an Irishman, were hired for an outgoing galleon, but the vessel was not identified. It may have been the *San Sebastian*. The foreigners were hired as there was a shortage of Spanish pilots in Manila.

1754 ***Santa Ana*** – The ship sailed from Manila to Acapulco. It was

pursued and intercepted by the English pirate, George Compton and his crew. The vessel ran aground at Catalina Island, California as the Spaniards were attempting to escape from Compton. In any case, Compton captured the galleon and killed the survivors of the shipwreck. The Compton capture of the *San Sebastian* and the *Santa Ana* remain unconfirmed as there is little information about these two galleons.

1755 ***Nuestra Senora de la Santisima Trinidad*** – The ship sailed from Cavite to Acapulco and was piloted by a Frenchman, Antoine Limarie Boucourt. It arrived safely in Acapulco.

1757 ***Nuestra Senora del Rosario*** – The ship sailed from Cavite to Acapulco and arrived safely.

1758 ***Nuestra Senora de la Poteria*** – Sailed from Cavite and arrived in Acapulco.

1759 ***Nuestra Senora de la Santisima Trinidad*** – Sailed from Cavite to Acapulco and arrived safely.

1760 ***Nuestra Senora del Rosario*** – Sailed from Cavite to Acapulco and arrived safely.

1761 ***Nuestra Senora de la Santisima Trinidad*** – The ship sailed from Cavite and arrived in Acapulco.

1761 ***Filipino*** – According to Le Gentil, the ship sailed from Cavite to Acapulco the year before the arrival of the British in the Philippines in 1762 and the invasion of the country at that time. It was able to arrive safely in Acapulco and then returned to Manila in 1762.

1762 ***Nuestra Senora del Rosario*** – The ship sailed from Cavite and arrived in Acapulco.

1762 ***Nuestra Senora de la Santisima Trinidad*** – The ship sailed from Cavite to Acapulco but was caught up in a severe storm and lost its main mast. She returned to Cavite for repairs but was captured by British vessels. The British invaded the Philippines from 1762 to 1764 during the Seven Year's War. As Spain became allied to France during the war against Britain, she became a legitimate target for attack. As a result of the war, the British attacked and invaded both Havana and Manila.

The ship carried 60 guns and was known as the largest galleon ever employed in the Manila-Acapulco trade run. It was captured by the British on October 31, 1762 at the San Bernardino Strait also known as the "Embocadero," which is located between the islands of Luzon and Samar. The British frigates the *Argo* and the *Panther* had been sent out to search for the incoming galleon the *Filipino,* but instead encountered the *Nuestra Senora de la Santisima Trinidad* as it was trying to return to Cavite. The galleon had embarked from Cavite on September 3, 1762.

She carried a rich cargo of merchandise destined for the markets in

New Spain and Europe. The 2,000 ton galleon drew 33 feet of water when laden and her dimensions were: length of gun deck 167 ft, 6": beam 50 ft; and depth of the hold from poop deck, 30 ft, 6". The galleon was furnished with a high forecastle and poop deck which were characteristics of ship designs of that class and time. According to Schurz, he described the ship designs of the time saying that, "The apparent top heaviness of ships whose ends stood so high out of the water was partly offset by their unusual breadth of beam. Their half moon appearance was thus very different from the straighter lines of their predecessor, the oared vessels of the Mediterranean and of their successor the frigates. It was unwieldy and lumbering aspect in the latter half of the eighteenth century in accordance with world changes in marine design, the high stern and bow were cut down to approximate the lines of the frigate."

The ship had been built at the Royal Shipyard at Bagatao Island, Sorsogon and cost 191,000 pesos. In 1755, and in 1762, the pilot of the galleon was a Frenchman, Antoine Limarie Boucourt. When attacked by the British, she was only using 10 of her guns to defend herself. Usually the galleons on the Pacific line kept their guns in the hold until needed. The decks were filled with cargo and took up all the topside space.

1765 ***Santa Rosa*** – The ship sailed from Cavite to Acapulco and arrived safely.

1766 ***San Carlos Borromeo*** – The ship sailed from Cavite to Acapulco after extensive repairs were made to the vessel by Captain de Caseins at the port. The ship was too top heavy with an enormous superstructure, which had to be cut down in order to make the vessel seaworthy. The ship was originally constructed in Peru in 1763.

The ship arrived in Acapulco from Manila and carried one million pesos worth of cargo even though it was supposed to carry much less than that according to government restrictions of the time. In the cargo hold there were 80,000 women's combs in nine seamen's chests for sale in Acapulco. The galleon had set out, but had to return to Cavite because she was in danger of foundering. She was repaired by having her forecastle and poop deck reduced or cut down in order to ensure the ship's safety. It was thought that originally the ship was too top heavy due to the arrangement of her cargo, but by cutting down the forecastle, she was able to arrive safely in Acapulco. According to the French traveler, Le Gentil, who was in Manila during the years of 1766 to 1767, when the ship was constructed, it cost the king 130,000 pesos. He mentioned that the ship carried a cargo valued at more than one million pesos.

1767 ***Buen Consejo*** – The ship sailed from Manila directly to Cadiz, Spain instead of going to Acapulco. It took five months for the ship to

arrive there.

1768 ***Santa Rosa*** – The ship sailed from Cavite and arrived in Acapulco. While the ship was in Cavite, Le Gentil was still in Manila in 1767, and mentioned that this particular galleon could carry approximately 550 bales or 500 tons of merchandise. He said that the ship was a small one but had a "splendid between deck space, five and a half feet deep." The ship had been in use for thirty years in coastal trade in the Americas. It was constructed in Peru. While the ship was in Manila, its foredeck was considerably raised as the merchants in Manila wanted to ship a greater amount of goods to Acapulco and needed more space for cargo. But while the foredeck was completed the *San Carlos* arrived in Manila bringing news that they had to reduce how much cargo was placed in the vessel and sold in Acapulco. The addition of the larger foredeck was a useless expense.

1770 ***San Carlos Borromeo*** – Sailed from Cavite and arrived in Acapulco.

1771 ***San Jose de Gracia*** – Sailed from Cavite and arrived in Acapulco.

1773 ***San Jose*** – Sailed from Cavite to Acapulco.

1774 ***Nuestra Senora de la Consolacion*** – The ship sailed from Cavite and arrived in Acapulco.

1775 ***Concepcion*** – Sailed from Cavite and arrived in Acapulco.

1776 ***San Jose de Gracia*** – Sailed from Cavite to Acapulco and arrived safely.

1779 ***San Pedro el Caviteno*** – Sailed from Cavite and arrived in Acapulco.

1779 ***San Jose de Gracia*** – Sailed from Cavite to Acapulco and arrived safely. During its journey to Mexico, the galleon stopped at the port of Monterey, California.

1782 ***San Jose de Gracia*** – Sailed from Cavite and arrived in Acapulco.

1782 ***San Pedro*** – The galleon sailed from Cavite and was lost off of Northern Luzon. The ship was trying to sail to the Pacific using a new northern route taking it along the coast of Luzon rather than sailing to the San Bernardino Strait.

1784 ***San Jose de Gracia*** – Sailed from Cavite and arrived in Acapulco.

1784 ***San Felipe*** – The ship sailed from Cavite to Acapulco and made a stop in Monterey, California before proceeding to Mexico.

1785 ***San Jose*** – The ship sailed from Cavite to Acapulco, but made a stop in Monterey, California. The galleon experienced strong storms and was infested with lice, fleas and rats.

1786 ***San Andres*** – The galleon sailed from Cavite to Acapulco.

1787 ***San Jose*** – The ship sailed from Cavite to Acapulco and

brought home a great profit of 490,535 silver pesos from the sale of the cargo in Mexico.

1788 No galleon sailed this year.

1789 ***San Andres*** – The ship sailed from Cavite to Acapulco, but failed to sell her cargo there. Although this ship could have stopped at the port of Monterey, California, it did not but instead continued on its journey to Acapulco. It lost 36 men to scurvy and had to leave 45 sick individuals at the Mexican port of San Blas to convalesce.

1790 No Galleon from Manila to Acapulco.

1791 ***San Andres*** – Sailed from Cavite to Acapulco.

1792 No Galleon from Manila to Acapulco.

1793 ***San Fernando*** - Sailed from Cavite to Acapulco.

1794 ***San Fernando*** – Sailed from Cavite to Acapulco.

1795 Two unidentified galleons sailed from the Philippines to Mexico and stopped at the port of Monterrey, California.

1796 ***San Andres*** – The galleon sailed from Cavite to Acapulco and brought home a profit of 1.4 million pesos.

1797 ***San Fernando*** – The ship sailed from Cavite to Acapulco.

1798 ***San Andres*** – The ship sailed from Cavite to Acapulco and was wrecked on the shoals of the Naranjos Islands near the San Bernardino Strait. The ship was under the command of Captain General Manuel Lecoraz. The crew and passengers aboard the ship were saved, but the cargo was lost.

1799 ***San Fernando*** – The ship sailed from Manila to Acapulco, but the voyage was abandoned at Sorsogon, Philippines. The cargo was transferred to another vessel the *San Rafael* which returned to Cavite.

1800 ***San Fernando*** – The galleon sailed with two military escorts the *Fama* and the *Lucia* which both were provided with special commercial permits presumably to carry cargo.

1802 ***Rey Carlos*** – The galleon sailed from Cavite to Acapulco with two military escort vessels the *Montanes* and the *Casualidad* and two other vessels, which were in the port of Cavite at the time. The first vessel the *Guia* from Lima, Peru, and the other ship was the *San Francisco Xavier* which was owned by the Royal Philippines Company trade house. The *Rey Carlos* lost its way to Acapulco during the journey across the Pacific and sailed to the port of San Blas, in northern Mexico. The vessels returned to the Philippines with unsold cargoes. This coincided with the movement in Mexico for independence which affected the galleon's inability to sell the cargo.

1802 ***Filipino*** – Sailed from Manila to Acapulco and was only able to sell a small amount of cargo.

1803 No Galleon.

1804 ***Concepcion*** – Sailed from Manila to Acapulco.

1804 ***Rey Carlos*** - Sailed to Acapulco with two escort vessels the

Montanes and the *Casualidad*. The galleon remained in Acapulco for three years without selling her cargo.

1805 No Galleon.

1806 ***San Fernando*** – The ship was captured by the British and ransomed at Macau.

1809 ***San Fernando***

1810 An unidentified ship arrived in Acapulco from Manila. Its entire cargo was bought by six merchants in Acapulco for 1.8 million pesos instead of being sold openly at the Acapulco trade fair.

1811 ***San Carlos*** – The ship sailed from Cavite to Acapulco, but was unable to unload its cargo due to a siege of the city by Mexican revolutionaries involved in their effort to gain independence from Spain. The ship then sailed to the Mexican port of San Blas, but was again unable to sell the cargo leading to huge losses for the investors in Manila.

1811 ***Magallanes*** (also known as the ***Rey Fernando***) – The galleon sailed from Cavite to Acapulco. From 1810 to 1821, Mexicans were involved in a War of Independence against their Spanish colonial masters. During this time of conflicts in Mexico, the Manila-Acapulco galleon trade run came to an end. However, before the trade run ended, several galleons tried to sell their cargoes in Acapulco with little success. They returned to Manila with the unsold cargoes. One of the last galleons to arrive in Acapulco was the *Magallanes* or the *Rey Fernando* which arrived at the port city in 1811. The galleon was stranded at the port for four years. The revolutionary commander, Jose Maria Morelos, prevented the unloading of the galleon and the sale of its cargo. After the revolution ended in 1821, the ship was allowed to return to Manila. According to historical records, the *Magallanes* was declared as the last official galleon to sail the transpacific route to Acapulco from Manila.

1812 No galleon sailed from Cavite to Acapulco.

1813 ***San Antonio*** – The galleon sailed from Cavite to Acapulco.

1815 ***Santa Rita*** and the ***Victoria*** – The two vessels sailed from Cavite to Acapulco.

1817 ***Magallanes*** (also known as the ***San Fernando***) – Sailed from Cavite to Acapulco.

1818 No galleon sailed from Cavite to Acapulco.

1819 A number of frigates sailed to Mexico from Manila to conduct trade. They were the: *Santa Rita*, *Nuestra Senora del Carmen*, *Felix Emprendador*, *Carmo*, *San Rupert*. Their cargoes were unsold in Mexico with great financial losses for the investors.

1820 A vessel was sent to Acapulco, but its cargo was seized by General Agustin de Iturbide commander of the Mexican revolutionary forces. Moreover, 525,000 silver pesos were seized from a mule train

that was traveling from Mexico City to Acapulco. The funds were sent to Acapulco to merchants there for goods brought to the port on the galleon and which was supposed to be sent on to the investors in Manila.

1822 This year a brigantine the *El Feliz* was sent to Acapulco on a special mission from Manila. The purpose of the voyage was to seek reparations for the cargo of silver pesos which was seized by Commander Iturbide in Mexico, but the Manila government's requests were ignored. The ship returned to Manila and the link between Mexico and the Philippines was completely at an end.

The following galleons have not been identified for any particular year of travel:

Santa Margarita – The ship embarked from Manila to Acapulco and was shipwrecked near the Marianas. Of the 250 persons on the vessel, only five were found alive. The cargo of silk and other valuables was plundered possibly by the natives of the Marianas.

Galleons to Peru

While the majority of the galleons travelled from Manila to Mexico, two went directly from Manila to Callao, the port city of Lima, Peru. The two galleons proved highly profitable, but this practice was discontinued almost from the beginning by a Royal Order of 1582. It was thought by government officials in Spain and in Mexico that the traffic between Manila and Lima, would interfere with the Porto Bello, Panama galleons, which supplied Spain with silver, gold and other goods from the New World. A law in 1591 also prohibited direct trade between South American and Central American colonies with China and the Philippines.

1581 A galleon sailed to the port of Callao, Peru in this year. The cargo was sold and proved highly profitable for the investors in Manila and in China.

1582 Another galleon sailed in 1582 to Callao, Peru from Manila and again it was very profitable.

Galleons from Acapulco to Manila

1566 ***San Geronimo*** – The galleon sailed from Acapulco to the island of Cebu in October 1566. It was under the command of Captain General Pedro Sanchez Perico and Ortiz de Mosquera. Both men were experienced soldiers and had been involved in the Pizzaro expedition in Peru. A conflict arose aboard the ship between Perico and Mosquera, which evolved into a mutiny on the vessel. The main agitator for the mutinous action was an elderly man, Lope Martin. It was Lope Martin's plan to take over the command of the ship and sail the vessel to China where he hoped to become rich.

Lope Martin had been a member of the Miguel Lopez de Legazpi's

expedition to the Philippines in 1565 when the country was seized on behalf of the Spanish Crown. Martin deserted his duties at the time, and was afraid that Legazpi was going to bring criminal charges against him. As a result, he was responsible for the mutinous actions on the ship, as he was trying to avoid going to the Philippines and confronting Legazpi. The vessel had a crew of 150 men – many of whom had seen action in Peru and Chile. The mutineers killed their commander Pedro Sanchez Perico and his son while they slept. Their bodies were thrown overboard into the sea. Eventually, the mutiny was put down and Lope Martin and Ortiz de Mosquerra were arrested. Weapons were confiscated from men loyal to Martin and Mosquerra. Later on, Mosquerra was executed and his body was thrown into the sea.

1567 ***San Juan*** and the ***San Juanillo*** – The two vessels embarked from the Mexico in late July for the Philippines. They were under the command of Captain General Juan de la Isla.

1568 ***San Pablo*** – The vessel was shipwrecked in 1568. The galleon was one of the original vessels which arrived in the island of Cebu, Philippines with Miguel Lopez de Legazpi in 1565. In 1568 two galleons arrived in Cebu from Mexico, one of which was the *San Pablo* which was under the command of Captain General Felipe de Salcedo, Legazpi's grandson.

The *San Pablo*, with a carrying capacity of 300 tons, was on its way to Acapulco when it was lost at sea near Guam in the Marianas. This was the first maritime disaster incurred by the galleons of the trade run.

1570 ***Santiago*** – Three ships arrived in Manila from Mexico in 1570 under the command of Captain General Juan de la Isla. The *Santiago* carried 40,000 pounds of biscuits, 2,388 pounds of fish and 4,418 pounds of salted meat.

1572 ***Santiago*** – The galleon sailed from Acapulco to Manila.

1573 ***Santiago*** and the ***Espiritu Santo*** - Two galleons arrived in the Philippines from Acapulco on June 5, 1574 (another account gives the date as July 5, 1573). Sailing on the capitana, the *Espiritu Santo* was Captain General Alonso Velasquez. The other galleon was the almiranta the *Santiago* which was commanded by Alferez (Lieutenant) Sancho de Agurto. Preparations were made in Manila to send the two ships back to Acapulco, but the *Santiago* was not ready to make the journey. She was kept in the Philippines until the 1575 voyage.

1575 ***Espiritu Santo*** – The vessel sailed from Acapulco to Manila, but the galleon was shipwrecked in the region of Catanduanes, Philippines. The ship encountered a severe storm which led to the disaster. Most of the individuals on the ship died except for a few survivors who were later killed by natives when they reached the

shore. The galleon carried a large contingent of soldiers and clergy. According to Gemelli Careri, he said in 1696, that the pilot of the *Espiritu Santo* was unable to find the San Bernardino Strait. The Captain General of the ship was Juan de la Isla. Another person of note on the vessel was Juan Fortun, who may have been an officer on the ship. The chief pilot was a man by the name of Farfan, and he had made the transpacific journey three times – twice as an assistant pilot and once as a chief pilot. It was said that he was very experienced and respected by the Spaniards.

1590 ***Santiago*** – The ship sailed from Acapulco to Manila.

1590 ***San Felipe*** – The ship sailed from Acapulco to Manila, but was shipwrecked off the coast of the island of Marinduque in the Philippines. The ship's crew survived the wreckage with the cargo and silver which were valued at 500,000 pesos.

1595 ***Santiago*** and the ***San Felipe*** – Two galleons sailed from Mexico to Manila and arrived there on January 10, 1595. Aboard one of the vessels was Dr. Antonio de Morga, a judge with the Royal Audiencia in Manila who was also the deputy governor for the Philippines.

1596 ***San Jeronimo*** – The galleon traveled from Mexico to Manila and was under the command of Captain General Fernando de Castro. As the ship sailed towards Luzon and its final destination, it was shipwrecked off the coast of the Cataduanes. The captain general and most of his crew died in the disaster. Aboard the ship was 1.5 million in silver which was lost in the disaster.

1601 ***San Tomas*** – The ship sailed from Acapulco to Manila and arrived safely.

1602 ***Jesus Maria*** – The ship sailed from Acapulco to Manila. It was able to rescue 260 survivors of the *Santa Margarita* which sailed to Acapulco in 1600 from Manila. The ship was wrecked in the Marianas.

1603 ***Nuestra Senora de los Remedios*** – The galleon sailed from Acapulco to Manila and disappeared as it neared the Philippines.

1607 A galleon sailed from Acapulco to Manila, but it is unidentified at this point.

1620 ***Jesus Maria*** – The galleon was on its way from Acapulco to Manila, and passing the San Bernardino Strait in the Philippines, it was attacked by a Dutch vessel. The ship carried a crew of 460 men and silver valued at more than 1 million in silver pesos. The galleon sank during the encounter and battle that ensued with the Dutch.

1620 ***Santa Ana*** – This galleon was under the command of Captain General Pedro Alvarez Piger. As it was passing through the San Bernardino Strait, it was attacked by a fleet of Dutch vessels. The captain general of the galleon surrendered to the Dutch after a battle with the enemy vessels and the loss of many casualties. The badly

damaged galleon was wrecked on the shores of the San Bernardino Strait.

1620 ***San Nicholas*** - In 1620, the *San Nicholas* was also returning to Manila from Acapulco with an accompanying patache. The two ships were attacked by a Dutch fleet of three vessels as they passed through the San Bernardino Strait. They fought off the Dutch for one day and managed in the night to sail to the harbor of Borongan, Samar. While the galleon was in Samar she was repaired, but as her ropes failed to hold the galleon in place, she drifted onto the rocks along the shore. The crew was able to retrieve the silver the ship carried. A few days later the patache, the consort vessel of the galleon encountered the Dutch and after a battle with them, it was able to sail away to the port of Palapag, Samar. The silver she carried was safely removed to a secure location.

1639 ***San Ambrosio*** – The ship sailed with another vessel from Acapulco to Manila. It was shipwrecked during a storm off the coast of Cagayan. One hundred and fifty persons drowned. The ship carried two million in silver pesos, which was later recovered by the governor in Manila.

1643 ***Buen Jesus*** – The galleon sailed from Acapulco to Manila and was lost at sea.

1646 ***San Luis*** – This galleon was commanded by Captain General Fernando Lopez Perona. She sailed from Acapulco to Manila and was stranded along the coast of Cagayan. All of the ship's crew was saved, as well as the silver and cargo aboard the vessel.

1648 ***Buen Jesus*** – The ship sailed from Acapulco to Manila on Easter Sunday, April 12, 1648. On board the ship was a Dominican missionary, Fray Domingo Fernandez Navarrete. As he sailed on the ship he kept notes of the journey which provided an insight into the voyage from Mexico to the Philippines. He was travelling with twenty-nine other Dominican missionaries. The ship reached the Philippines on June 23, 1648. It was anchored off the east coast of the island of Luzon. From this coast, the missionaries walked to Manila. When the ship arrived at the Philippines, the Spaniards aboard the galleon learned that four Dutch ships were in the region and as the Dutch were the enemies of the Spaniards, the Captain General Cristobal Romero, decided to burn the ship rather than taking the risk that the Dutch might seize the vessel and use it against the Spaniards in Manila. Before burning the vessel, all of the crew, passengers and cargo were taken ashore.

1649 ***Encarnacion*** – This galleon traveled from Acapulco to Manila and was shipwrecked along the Sorsogon coast of Luzon.

1655 ***San Francisco Xavier*** – As the galleon sailed from Acapulco to Cavite, it sank in the Bay of Baronga.

1662 ***San Damian*** – The ship sailed from Acapulco to Manila and arrived safely. On board was the missionary, Fray Diego Luis de San Victores. He sent a petition to the king asking for permission to set up a mission in the Marianas. The ship stopped there on its way to Manila and he found that the natives there were in need of spiritual guidance. In 1666, a Royal Decree was received in Manila stating that the missionaries could set up the mission in the Marianas. He returned to Mexico aboard another galleon the *San Diego* in 1668.

1677 ***Concepcion*** – The ship sailed from Acapulco to Manila. On board the vessel were a number of criminals who were transported from Mexico to the Philippines where they were expected to serve as soldiers. In a bid to send greater numbers of Spaniards to the Philippines, Mexico had begun emptying out its prisons and pardoning criminals who agreed to serve in the Philippines as soldiers.

1686 ***San Telmo*** – The ship sailed from Acapulco to Manila. The governor of the Philippines in Manila sent out another galleon the *Santo Nino* with 100 cannons and 1,000 men to escort the *San Telmo* from the San Bernardino Strait to Cavite. At the time, the governor was afraid that the galleon might be attacked by British vessels which were spotted in the area.

1689 ***Santa Rosa de Lima*** – The ship was under the command of Captain General Geronimo Galvez, who was also an experienced pilot. While he traveled to Manila from Acapulco, his wife who remained in Acapulco was raped by a Spaniard by the name of Sebastian de la Plana. She was so distressed by the incident that she committed suicide. When Galvez returned to Acapulco and found out that his wife was dead, he accused La Plana of murder and vowed to seek revenge. Meanwhile, La Plana sailed to Manila on another vessel. While there, he grew a beard and changed his name and had his face disfigured by a surgeon in order to hide his identity. But Galvez returned to Manila and found La Plana. They fought and La Plana was seriously injured. He died soon after the confrontation with Galvez.

1690 ***Santo Nino*** and the ***Nuestra Senora del Pilar de Zaragoza y Santiago*** - The *Santo Nino* and her escort vessel the *Nuestra Senora del Pilar de Zaragoza y Santiago* sailed from Acapulco to Manila in 1690. The two ships were expected to make a stopover in Guam where they were to deliver to the colony its yearly financial subsidy from Mexico. Aboard the *Santo Nino* was the new Governor for the Philippines, Fausto Cruzat y Gongora (governed from 1690 to 1701), who was expected to take up his new post in Manila.

The escort vessel, the *Nuestra Senora del Pilar*, a vessel of 1,000 tons carrying capacity, had on board a large squadron of forty-three soldiers, as well as twenty-two Franciscan missionaries. The ship also carried convicted criminals who were pardoned in Mexico for their

crimes, when they accepted to travel and settle in the Philippines in return for their freedom. However, as the *Nuestra Senora del Pilar* neared the Cocos Reef off the southern coast of Guam on June 2, 1690, she ran aground. The three hundred individuals on the ship were rescued by the *Santo Nino*, but it was necessary to abandon the *Nuestra Senora del Pilar*, which quickly sank to the bottom of the sea with the treasure she carried. As the *Santo Nino* was unable to carry all of the rescued 120 crew members and passengers of the *Nuestra Senora del Pilar*, the commander decided to only take on board the galleon the most influential passengers, while the rest were transferred to the shore where they awaited a rescue vessel. Miraculously, there were no casualties due to the shipwreck.

The commander of the *Santo Nino* was worried that his own vessel might be shipwrecked as well so he decided to continue his voyage to Manila rather than stopping in Guam. The *Nuestra Senora del Pilar* was carrying a cargo of approximately 1.50 million in silver, which had been used in the vessel as additional ballast in the hold. An ongoing salvage program of the ship was begun in the 1990s by the Pilar Project Ltd. Over the years, local salvage companies in Guam have uncovered more than 2,000 artifacts including pottery shards, bits of timber from the ship, lead sheathing, parts of the hull, silver coins, religious items, cannon and musket balls.

1692 ***Santa Rosa*** – The galleon sailed from Acapulco to Manila.

1696 ***Rosario*** – The ship sailed from Mexico to the Philippines and arrived safely. She anchored at the port of Palapag in northern Samar. The cargo and silver aboard the ship was transferred to Manila on other vessels, as she experienced difficulties when trying to pass through the San Bernardino Strait.

1698 ***San Francisco Xavier*** – The ship sailed from Acapulco to Manila and arrived safely. It was unable to sail through the San Bernardino Strait and instead went around northern Luzon and down the west coast of the island to reach Cavite.

1702 ***San Francisco Xavier*** – The galleon sailed from Acapulco to Manila and arrived safely.

1720 ***Santo Cristo de Burgos*** – The galleon sailed from Acapulco to Manila. This vessel may have been the same ship which the Captain John Clipperton, an Englishman, thought of attacking as it sailed out of the port of Acapulco. He was then in the area and sailing aboard his ship the *Success*. The attack was never carried out as he changed his mind and decided to try to capture a galleon in the Philippines.

1730 ***Sacra Familias*** – The ship sailed from Acapulco to Manila and was lost as it traveled through the San Bernardino Strait.

1736 ***San Cristobal*** – The galleon sailed from Acapulco to Manila and was shipwrecked on the Calantas shoals near Bulusan, Sorsogon,

Philippines.

1743 ***Nuestra Senora de la Covadonga*** – The ship sailed from Acapulco to Manila and was captured by Commodore George Anson as it neared the Philippines. The commander of the *Nuestra Senora de la Covadonga* was Captain General Jeronimo Montero, a Portuguese, who was a highly experienced mariner. He was also an experienced ship's master and pilot.

1755 ***Concepcion*** – The galleon was caught up in a typhoon and shipwrecked in the Marianas as it sailed from Acapulco to Manila.

1756 ***Capitana*** – The ship sailed from Acapulco to Manila. It was under the command of Captain General Pedro Vertiz and sank near the San Bernardino Strait. Most of the individuals on the ship were saved.

1762 ***Filipino*** – The ship sailed from Acapulco to Manila. As it entered Philippine waters, the Captain General Juan Antonio Blanco de Sotomayor, learned that the British had invaded Manila and would, no doubt, search for the galleon in order to seize it. Instead of sailing to Cavite and risk being captured by the British, he anchored at a port in northern Samar. He also transferred the cargo and silver on the ship to the camp of Simon de Anda, who was leading a resistance group against the British invaders. The ship carried 2.3 million Mexican silver pesos, as well as the 250,000 peso subsidy for the maintenance of the colonial government in the Philippines. The ship was finally located by the British but as the cargo and pesos had been removed from the ship, in frustration the British set the galleon afire.

1766 ***Santa Rosa*** – The ship sailed from Acapulco to Manila and arrived safely.

1768 ***San Carlos*** – The ship sailed from Acapulco to Manila.

1788 ***San Jose*** – There's little information about this vessel.

1795 ***San Fernando*** – The ship sailed from Acapulco to Manila with an escort vessel the *Concepcion*.

1797 ***San Andres*** – The ship sailed from Acapulco to Manila.

1802 ***Montanes*** and the ***Casualidad*** – The warship galleons returned to Manila from Acapulco with unsold cargoes.

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